

CITY OF EMPORIA



December 13, 2011

Janine Howard Water Permit Writer VA/D.E.Q. Piedmont Regional Office Glen Allen, VA 23060

Re: VPDES Permit No. VA0020346 Renewal Application

Dear Ms. Howard,

Please find enclosed our permit renewal packet for the City of Emporia's Wastewater Treatment Facility. Also find enclosed the facilities' VPDES Sewage Sludge Permit Application Form, Exclusion from VPDES Storm Water Permitting, and Permit Application Addendum.

Georgia Pacific is the City's only industrial discharger, and have been fully cooperative in working with us on the past plant upset issues.

I/we appreciate your patience and help in this process. I have filled out these applications honestly, and to the best of my ability, and hope everything is correct. If there are any data missing, in need of correction, or you have any other questions, please do not hesitate to contact me. I may be reached at the facility at: (434) 634-5682, or via e-mail at: melvindebra@aol.com.

Again, thank you very much for all of your assistance, and we look forward to working with you in the future.

Sincerely,

Melvin W. Prince, Jr.

me v. Ping

Operator-in-Charge, Wastewater Treatment

Enclosures

Cc. Brian S. Thrower, City Manager
Linwood Pope, Director of Public Utilities
Wastewater File

	7
FACILITY NAME AND PERMIT NUMBER:	Form Approved 1/14/99
Emporia WWTP VA0020346	OMB Number 2040-0086

BA	ASIC APPLICA	TION INF	ORMATION			
PAI	RT A. BASIC APP	LICATION IN	FORMATION FOR ALL	APPLICANTS:		
All t	reatment works mus	st complete qui	estions A.1 through A.8 o	of this Basic Application	on Information pa	icket.
	Facility Information					
	Facility name	City of Emp	oria Wastewater Treatm	ent Facility		
	Mailing Address	P.O. Box 51 Emporia,Va.	1 201 South Main Stree . 23847	<u>t</u>		
	Contact person	James L. Ep	ps			
	Title	Superintinde	ent Of Wastewater Treat	ment		
	Telephone number	(434) 634-56	382			
	Facility Address (not P.O. Box)	500 Tall Oak	s Drive			
A.2.	Applicant Informati	ion. If the appli	cant is different from the ab	ove, provide the followi	ing:	
	Applicant name	City of Empo	ria	Mile Mile of the state of the S		MATERIAL DESCRIPTION OF THE PROPERTY OF THE PR
	Mailing Address	P.O.Box 511 Emporia Va.	201 South Main Street 23847			
	Contact person	Brian S. Thro	ower	· · · · · · · · · · · · · · · · · · ·	110000	
	Title	City Manage	r			
	Telephone number	(434) 634-33	32			
	owner		ator (or both) of the treatr operator garding this permit should b applicant		y or the applicant.	
	Existing Environme works (include state-i	issued permits).	Provide the permit number o	of any existing environn PSD		t have been issued to the treatment
				-		
	BCD A			Other		
	Collection System Ir each entity and, if kno etc.).	nformation. Pro own, provide info	ovide information on munic ormation on the type of coll	ipalities and areas serve ection system (combine	red by the facility. ed vs. separate) ar	Provide the name and population of nd its ownership (municipal, private,
İ	Name		Population Served	Type of Collection	on System	Ownership
	City of Emporia		5927	Separate		Municipal
-	Total pop	ulation served	5927	and the state of t	Exercise of the State of the St	

FAC	ILITY NAME AND PERMIT NUN	//BER:				Form Approved 1	1/14/99
Emp	oria WWTP VA0020346					OMB Number 20	040-0086
A.5.	Indian Country.		MANAGEMENT OF THE STATE OF THE		·		
	a. Is the treatment works local	ted in Indian Country	.				
	Yes	No No					
	b. Does the treatment works of		in water that is either in	Indian Country or that	. in 6	/ 1 / D	
	through) Indian Country?	a receiving	g water mat is emier m	indian Country or mai	is upstream from	(and eventually	flows
	Yes	✓ No					
A.6.	Flow. Indicate the design flow average daily flow rate and max period with the 12th month of "ti	diffutti daliy flow rate i	of each of the last three	vears Fach vear's d	lata must ha hacar	ndle). Also pro d on a 12-montl	vide the n time
	a. Design flow rate	1.5 mgd					
		<u>Two `</u>	Years Ago	Last Year	This Year		
	b. Annual average daily flow ra	ite	.971	.9	60	.811	mgd
	c. Maximum daily flow rate		1.992	1.9	53	2.569	mgd
A.7.	Collection System. Indicate the	e type(s) of collection	system(s) used by the	treatment plant. Chec	k all that apply. A	lso estimate the	e percent
	contribution (by miles) of each.				,		, po. 00
	Separate sanitary sew	er			***************************************	100	%
	Combined storm and s	anitary sewer			ATTOMPS AS A STREET AS A STREE		%
4.8.	Discharges and Other Disposa	al Methods.					
	Does the treatment works di	in the same of the same of					
					V Yes	***************************************	No
	If yes, list how many of each i. Discharges of treated eff		or discharge points the	treatment works use:			
	ii. Discharges of untreated		luonė		<u>1</u>		
	iii. Combined sewer overflo		luern			/ <u>/</u> A	
	iv. Constructed emergency		, handwerten)			/A	-
	v. Other	overnous (prior to the	: Headworks)		*****	/A	
					N	/A	
į	 Does the treatment works dis impoundments that do not ha 	scharge effluent to ba	sins, ponds, or other su	rface			
	If yes, provide the following for			. '	Yes		No
	Location:						
	Annual average daily volume	discharged to surface	e impoundment(s)	***************************************		mgd	
			intermittent?	20 Carrier 1997		mga	
	***************************************	***************************************	Xinta				
C	c. Does the treatment works lan			-	Yes		10
	If yes, provide the following for	or each land application	on site:				
	Location:				N-1	No of the last of	
	Number of acres:	A		Productive and a second			
	Annual average daily volume			Mgd			
	Is land application	continuous or	intermitten	t?			
d	d. Does the treatment works disc	charge or transport tre	eated or untreated wast	ewater to another		_	
	treatment works?			-	Yes	<u> </u>	lo

	ITY NAME AND PERMIT NUM a WWTP VA0020346	BER:		Form Approved 1/14/99 OMB Number 2040-00
	If yes, describe the mean(s works (e.g., tank truck, pipe) by which the wastewater from the treatm	I nent works is discharged or trans	sported to the other treatment
	If transport is by a party oth	er than the applicant, provide:		
	Transporter name:			
	Mailing Address:			
	Contact person:			
	Title:			
	Telephone number:		400000000000000000000000000000000000000	
	-			
	was Michigan	at receives this discharge, provide the foll	owing:	
	was Michigan	at receives this discharge, provide the foll	owing:	
	For each treatment works th	at receives this discharge, provide the foll	owing:	
	For each treatment works the	<u>at receives this discharge,</u> provide the foll	owing:	
	For each treatment works the Name: Mailing Address:	at receives this discharge, provide the foll	owing:	
	Name: Mailing Address: Contact person: Title:	<u>at receives this discharge,</u> provide the foll	owing:	
	For each treatment works the Name: Mailing Address: Contact person: Title: Telephone number:			
	For each treatment works the Name: Mailing Address: Contact person: Title: Telephone number: If known, provide the NPDES	at receives this discharge, provide the following the following the following the following the following the following the freatment works the following the freatment works into the respective to the following the freatment works into the following th	at receives this discharge.	mgd
e.	For each treatment works the Name: Mailing Address: Contact person: Title: Telephone number: If known, provide the NPDES Provide the average daily flo	s permit number of the treatment works th	at receives this discharge.	mgd No
e.	For each treatment works the Name: Mailing Address: Contact person: Title: Telephone number: If known, provide the NPDES Provide the average daily flo	s permit number of the treatment works the w rate from the treatment works into the re scharge or dispose of its wastewater in a r .g., underground percolation, well injection	at receives this discharge.	

_____ continuous or _____ intermittent?

Is disposal through this method

mpor	ITY NAME AND PERI		Form Approved 1/14/99 OMB Number 2040-0086
W	STEWATER DISCH	ARGES:	
lf y whi	ou answered "yes" t	to question A.8.a, complete ques	stions A.9 through A.12 once for each outfall (including bypass points) through on combined sewer overflows in this section. If you answered "no" to question Applicants with a Design Flow Greater than or Equal to 0.1 mgd."
9. C	escription of Outfall	l.	
а	. Outfall number	001	
b	. Location	City of Emporia	23847
		(City or town, if applicable) Greensville	(Zip Code)
		(County)	VA (State)
		39' 40' 43' (Latitude)	(State) 77' 31' 35' (Longitude)
c.	Distance from shore	•	N/A ft.
d.	Depth below surfac	e (if applicable)	
e.	Average daily flow	rate	mgd
f.	Does this outfall happeriodic discharge?	ve either an intermittent or a	Yes No (go to A.9.g.)
	If yes, provide the fo	ollowing information:	110 (go to 110.g.)
	Number of times pe	er year discharge occurs:	
	Average duration of	each discharge:	
	Average flow per dis	scharge:	mgd
	Months in which dis-	charge occurs:	
g.	ls outfall equipped v	vith a diffuser?	Yes No
). De	scription of Receivi	ng Waters.	
a.	Name of receiving w	vater Meherrin River	
b.	Name of watershed	(if known)	Meherrin River/Falling Run
	United States Soil C	conservation Service 14-digit water	ershed code (if known): Unknown
C.	Name of State Mana	agement/River Basin (if known):	Chowan River/Dismal Swamp
	United States Geolog	gical Survey 8-digit hydrologic cata	taloging unit code (if known): 03010204
ď.	Critical low flow of re	eceiving stream (if applicable):	chronic18.98 cfs
			(if applicable): N/A mg/l of CaCO ₃

Emporia WWTP VA	0020346	NUMBER:				Form Approved 1/14/99 OMB Number 2040-0086					
A.11. Description of	Treatment.										
a. What levels	of treatmen	nt are provide	d? Check all	that a	pply.						
And the state of t	Primary		1	Secon							
W	Advanced			Other.	. Describe:	Sreenin	gs,Grit Rem	oval.Uv Disinfe	ection	n &Cannibal Sys	
b. Indicate the	following re	emoval rates	(as applicable	e):			***************************************				
		or Design CB		-		9	0	%			
Design SS r			J			9		%			
Design P re	noval					**************************************	/A	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			
Design N re	noval						/A	***************************************			
Other								%			
D-111	dicinfontion	- : for 1	·				<u>/A</u>	<u></u> %			
UV						isinfection var	ies by seasor	n, please describ	e.		
						***************************************		~			
		rination, is de		sed for	r this outfall	?		Yes		No	
d Does the tra-	itment plan	it have post a	eration?					Yes		No	
A.12. Effluent Testing parameters. Pro <u>discharged</u> . Do collected throug of 40 CFR Part 1	Information vide the in not including the analysis 36 and other section in the se	on. All Appli dicated efflu le informatio conducted ner appropria	n on combin using 40 CFI ate QA/QC re	reguire ned sev R Part eguirer	ed by the pe wer overflo t 136 metho ments for s	ermitting auth ws in this sec ds. In additio	tion. All info tion. All info on, this data	effluent testing ch outfall through ormation reporte must comply with	ah wheel must be seen when the seen wheel wheel seen which seen wh	nich effluent is ust be based on A/QC requiremen	
A.12. Effluent Testing parameters. Pro <u>discharged</u> . Do collected throug of 40 CFR Part 1 At a minimum, e	Information vide the in not including analysis 36 and other filuent test	on. All Appli dicated efflu le informatio conducted ner appropria	n on combin using 40 CFI ate QA/QC re	require ned sev R Part equirer on at l	ed by the po wer overflo t 136 metho ments for si least three	ermitting auth ws in this sec ds. In additio	ority <u>for eac</u> tion. All info in, this data ods for anal must be no	effluent testing ch outfall through ormation reporte must comply with	ah wh ed mi ith Q ised b and d	nich effluent is ust be based on A/QC requiremer by 40 CFR Part 13 one-half years a	
A.12. Effluent Testing parameters. Pro <u>discharged</u> . Do collected throug of 40 CFR Part 1 At a minimum, e	Information vide the in not including analysis 36 and other filuent test	on. All Appli dicated efflu le informatio conducted ner appropria	n on combin using 40 CFI ate QA/QC re ist be based	require ned sev R Part equirer on at l	ed by the po wer overflo t 136 metho ments for si least three	ermitting auth ws in this sec ds. In additio	ority <u>for eac</u> ction. All info on, this data ods for anal must be no	effluent testing ch outfall through primation reporte must comply will ytes not addres more than four	th wheel must be seed to and co	nich effluent is ust be based on A/QC requiremer by 40 CFR Part 1 one-half years a	
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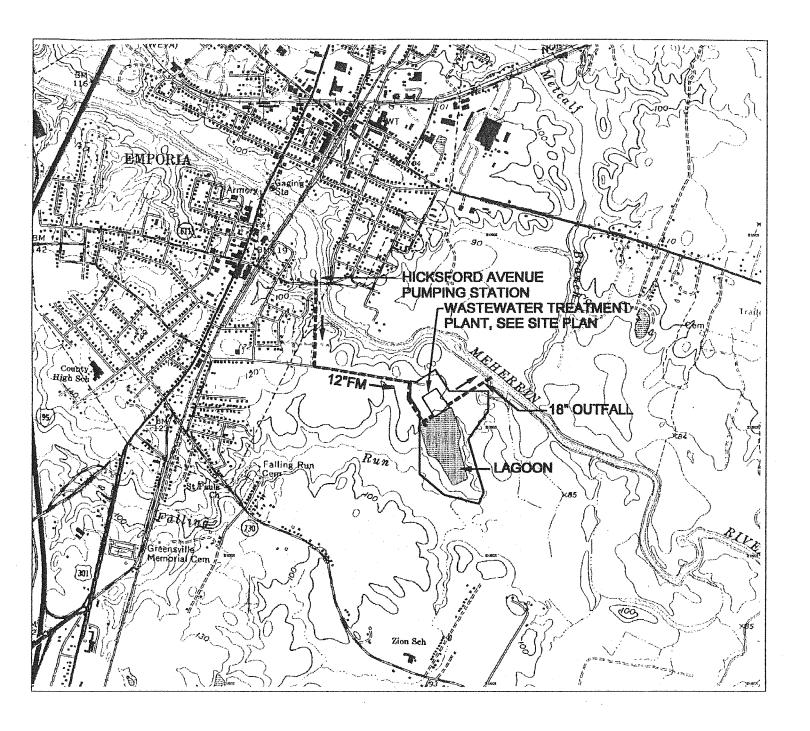
1	CILITY NAME AND PERMIT NUMBER: Poria WWTP VA0020346	Form Approved 1/14/99 OMB Number 2040-0086
BA	ASIC APPLICATION INFORMATION	
PAF	RT B. ADDITIONAL APPLICATION INFORMATION FOR EQUAL TO 0.1 MGD (100,000 gallons per day).	APPLICANTS WITH A DESIGN FLOW GREATER THAN OR
All a	pplicants with a design flow rate \geq 0.1 mgd must answer questions B	8.1 through B.6. All others go to Part C (Certification).
ł	Inflow and Infiltration. Estimate the average number of gallons p	er day that flow into the treatment works from inflow and/or infiltration.
	116,000_gpd	
	Briefly explain any steps underway or planned to minimize inflow at	
; 	Repair as needed or as money becomes available. 5 year	capitol outlay to replace defective sewer mains .
B.2.	the entire area.)	the area extending at least one mile beyond facility property boundaries. rmation. (You may submit more than one map if one map does not show
	a. The area surrounding the treatment plant, including all unit proc	
	inclination waste water is discharged from the treatment plant. Incli	
	c. Each well where wastewater from the treatment plant is injected	
	marke, and 2) hated in public record of otherwise known to the a	
	e. Any areas where the sewage sludge produced by the treatment	
	f. If the treatment works receives waste that is classified as hazard truck, rail, or special pipe, show on the map where that hazardo disposed.	dous under the Resource Conservation and Recovery Act (RCRA) by us waste enters the treatment works and where it is treated, stored, and/or
-		the processes of the treatment plant, including all bypass piping and all water balance showing all treatment units, including disinfection (e.g, average flow rates at influent and discharge points and approximate daily on of the diagram.
B.4. C	Operation/Maintenance Performed by Contractor(s).	
,e	Are any operational or maintenance aspects (related to wastewater trends and transfer of the contractor?Yes	eatment and effluent quality) of the treatment works the responsibility of a
li p	f yes, list the name, address, telephone number, and status of each c lages if necessary).	contractor and describe the contractor's responsibilities (attach additional
N	lame:	
N	failing Address:	
т	elephone Number:	
	esponsibilities of Contractor:	
tre	5 for each. (If none, go to question B.6.)	patment, effluent quality, or design capacity of the treatment works. If the planning several improvements, submit separate responses to question
a.	List the outfall number (assigned in question A.9) for each outfall	that is covered by this implementation schedule.
b.	Indicate whether the planned improvements or implementation so	chedule are required by local. State, or Federal agencies
	YesNo	, , , , , , , , , , , , , , , , , , , ,

c If the answer	to B.5.b is "Yes,"	briefly describe,	including new ma	aximum daily infl	ow rate (if applic	cable).			
	or unbioactifetiff	compliance sche planned indepen- accurately as poss	denuv or local 5	il dates of compl tate, or Federal a	s of completion for the implementation steps listed below, as r Federal agencies, indicate planned or actual completion d				
		Schedu	ıle	Actual Comple	tion				
Implementati	on Stage	MM / D	D/YYYY	MM / DD / YYY	$\underline{\Upsilon}$				
 Begin const 	ruction			//	*****				
 End constru 	ction	/		//					
 Begin disch 	arge	/			···				
– Attain opera	tional level	/							
e. Have appropr	iate permits/clear	ances concerning	other Federal/S	tate requirement	ts been obtained	/?Yes	No		
		7.500.000							
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2A YOU MUST COMPLETE

FACILITY NAME AND PERMIT NUMBER:		Form Approximal 4/4 4/90
Emporia WWTP VA0020346		Form Approved 1/14/99 OMB Number 2040-0086
BASIC APPLICATION INFORMA	ATION	
PART C. CERTIFICATION		
applicable sections of	f Form 2A, as explained in the A is certification statement, applica	ormine who is an officer for the purposes of this certification. All opplication Overview. Indicate below which parts of Form 2A you nts confirm that they have reviewed Form 2A and have completed
Indicate which parts of Form 2A you have com	pleted and are submitting:	
Basic Application Information packet	Supplemental Application	nformation packet:
	Part D (Expanded	Effluent Testing Data)
	Part E (Toxicity Te	esting: Biomonitoring Data)
	Part F (Industrial I	Jser Discharges and RCRA/CERCLA Wastes)
	Part G (Combined	Sewer Systems)
ALL APPLICANTS MUST COMPLETE THE FOLI	OWING CERTIFICATION.	
I certify under penalty of law that this document and designed to assure that qualified personnel propert who manage the system or those persons directly in	d all attachments were prepared y gather and evaluate the inform	under my direction or supervision in accordance with a system ation submitted. Based on my inquiry of the person or persons rmation, the information is, to the best of my knowledge and for submitting false information, including the possibility of fine
Name and official title Brian S THROWER, (City Manager	
Signature BJR	wik	
Telephone number (434) 634-3392		
Date signed December	16,2011	
Upon request of the permitting authority, you must sworks or identify appropriate permitting requirement	submit any other information nec is.	essary to assess wastewater treatment practices at the treatment

SEND COMPLETED FORMS TO:



TOPOGRAPHIC MAP

SCALE: 1" = 2000' USGS EMPORIA QUADRANGLE

Emporia WWTP VA0020346

Form Approved 1/14/99 OMB Number 2040-0086

SUPPLEMENTAL APPLICATION INFORMATION

PART D. EXPANDED EFFLUENT TESTING DATA

Refer to the directions on the cover page to determine whether this section applies to the treatment works.

Effluent Testing: 1.0 mgd and Pretreatment Treatment Works. If the treatment works has a design flow greater than or equal to 1.0 mgd or it has (or is required to have) a pretreatment program, or is otherwise required by the permitting authority to provide the data, then provide effluent testing data for the following pollutants. Provide the indicated effluent testing information and any other information required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analyses conducted using 40 CFR Part 136 methods. In addition, these data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. Indicate in the blank rows provided below any data you may have on pollutants not specifically listed in this form. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall number: 001 (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT			JM DAIL HARGE	Y	A	VERAGI	EDAILY	DISCH	ARGE		
METALS (TOTAL RECOVERABLE),	Conc.	Units		Units	Mass	Units	Number of Samples	ANALYTICAL METHOD	ML/ MDL		
ANTIMONY	< 5.0	ug/l			<5.0	ug/l			3	EPA 200.7	5.0 ug/l
ARSENIC	< 5.0	ug/l			< 5.0	ug/l			3	EPA 200.7	5.0 ug/l
BERYLLIUM	< 0.5	ug/l			< 0.5	ug/l			3	EPA 200.7	0.5 ug/l
CADMIUM	1.0	ug/l			0.7	ug/l			3	EPA 200.7	0.5 ug/l
CHROMIUM	4.0	ug/l			2.3	ug/l			3	EPA 200.7	1.0 ug/l
COPPER	28.0	ug/l			16.3	ug/l			3	EPA 200.7	2.0 ug/l
LEAD	< 5.0	ug/l			< 5.0	ug/l			3	EPA 200.7	5.0 ug/l
MERCURY	< 0.2	ug/l			< 0.2	ug/l		-	3	EPA 245.1	0.2 ug/l
NICKEL	< 5.0	ug/l			< 5.0	ug/l			3	EPA 200.7	5.0 ug/l
SELENIUM	< 5.0	ug/l			< 5.0	ug/l			3	EPA 200.7	5.0 ug/l
SILVER	<1.0	ug/l			<1.0	ug/l			3	EPA 200.7	1.0 ug/l
THALLIUM	< 5.0	ug/l			< 5.0	ug/l	ĺ		3	EPA 200.7	5.0 ug/l
ZINC	127	ug/l			75.7	ug/l			3	EPA 200.7	5.0 ug/l
CYANIDE	<.005	mg/l			<.005	mg/l			3	EPA 335.4	0.005 mg/l
FOTAL PHENOLIC COMPOUNDS	<0.02	mg/l			< 0.02	mg/l			3	EPA 420.4	0.02 mg/l
HARDNESS (AS CaCO ₃)	339	mg/l		1	189.9	mg/l			3	SM2340B	.20mg/l
se this space (or a separate sheet) to	provide inf	ormation	on other r	netals rec	uested by	the perm	nit writer.				

Emporia WWTP VA0020346

Outfall number: 001	(Comp	olete ond	e for ea	ch outfal	dischar	ging effl	uent to v	vaters of	the United	States.)	
POLLUTANT		MAXIMU DISCI	JM DAIL HARGE	Υ	A'	VERAGI	E DAILY	DISCH	ARGE		95
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples	ANALYTICAL METHOD	ML/ MDL
VOLATILE ORGANIC COMPOUNDS				1			J				
ACROLEIN	< 50.	ug/l			< 50	ug/l			3	EPA 624	50 ug/l
ACRYLONITRILE	< 50	ug/l			< 50	ug/l			3	EPA 624	50 ug/l
BENZENE	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
BROMOFORM	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
CARBON TETRACHLORIDE	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
CLOROBENZENE	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
CHLORODIBROMO-METHANE	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
CHLOROETHANE	< 10	ug/l			< 10	ug/l			3	EPA 624	10 ug/l
2-CHLORO-ETHYLVINYL ETHER	< 10	ug/l			< 10	ug/l			3	EPA 624	10 ug/l
CHLOROFORM	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
DICHLOROBROMO-METHANE	< 5	ug/l			< 5.0	ug/l			3	EPA 624	5 ug/l
1,1-DICHLOROETHANE	< 5	ug/i			< 5	ug/l			3	EPA 624	5 ug/l
1,2-DICHLOROETHANE	< 5	ug/i			< 5	ug/l			3	EPA 624	5 ug/l
TRANS-1,2-DICHLORO-ETHYLENE	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
1,1-DICHLOROETHYLENE	< 5	ug/l			< 5	ug/l			3	EPA 624	. 5 ug/l
1,2-DICHLOROPROPANE	< 5	ug/l			<5	ug/l			3	EPA 624	5 ug/l
1,3-DICHLORO-PROPYLENE	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
ETHYLBENZENE	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
METHYL BROMIDE	< 10	ug/l			< 10	ug/l			3	EPA 624	10 ug/l
METHYL CHLORIDE	< 10	ug/l			< 10	ug/l			3	EPA 624	10 ug/l
METHYLENE CHLORIDE	< 10	ug/l			< 10	ug/l		The second secon	3	EPA 624	10 ug/l
1,1,2,2-TETRACHLORO-ETHANE	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
FETRACHLORO-ETHYLENE	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
TOLUENE	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l

Emporia WWTP VA0020346

Outfall number: 001	_ (Com	olete one	e for ea	ch outfall	l dischar	ging efflu	uent to w	vaters of	the United	States.)	
POLLUTANT			JM DAIL HARGE	Υ	A	VERAGI	E DAILY	DISCH	ARGE		
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples	ANALYTICAL METHOD	ML/ MDL
1,1,1-TRICHLOROETHANE	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
1,1,2-TRICHLOROETHANE	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
TRICHLORETHYLENE	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
VINYL CHLORIDE	< 10	ug/l			< 10	ug/l			3	EPA 624	10 ug/l
Use this space (or a separate sheet) to	provide i	nformatio	n on other	volatile o	rganic co	mpounds	requested	d by the p	ermit writer.		7
ACID-EXTRACTABLE COMPOUNDS			1177 TEP (A. 1177 TEP)								
P-CHLORO-M-CRESOL	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
2-CHLOROPHENOL	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
2,4-DICHLOROPHENOL	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
2,4-DIMETHYLPHENOL	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
4,6-DINITRO-O-CRESOL	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
2,4-DINITROPHENOL	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
2-NITROPHENOL	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
4-NITROPHENOL	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
PENTACHLOROPHENOL	< 10	ug/l			< 10	ug/l			3	EPA 625	10 ug/l
PHENOL	< 5	ug/l			< 5	ug/l	***************************************		3	EPA 625	5 ug/l
2,4,6-TRICHLOROPHENOL	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
Use this space (or a separate sheet) to p	orovide in	formation	on other	acid-extra	ctable cor	mpounds	requested	by the p	ermit writer.		
BASE-NEUTRAL COMPOUNDS.				l				L			
ACENAPHTHENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
ACENAPHTHYLENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
ANTHRACENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
BENZIDINE	< 5	ug/l		-	< 5	ug/l		1	3	EPA 625	5 ug/l
BENZO(A)ANTHRACENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
BENZO(A)PYRENE	<5	ug/l			< 5	ug/l	No.		3	EPA 625	5 ug/l

FACILITY NAME AND PERMIT NUMBER: Emporia WWTP VA0020346

Outfall number: 001	_ (Comp	lete onc	e for eac	ch outfal		_			the United	States.)	
POLLUTANT			JM DAIL HARGE	Y	Α'	VERAGE	DAILY	DISCH	ARGE		
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples	ANALYTICAL METHOD	ML/ MDL
3,4 BENZO-FLUORANTHENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
BENZO(GHI)PERYLENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
BENZO(K)FLUORANTHENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
BIS (2-CHLOROETHOXY) METHANE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
BIS (2-CHLOROETHYL)-ETHER	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
BIS (2-CHLOROISO-PROPYL) ETHER	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
BIS (2-ETHYLHEXYL) PHTHALATE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
4-BROMOPHENYL PHENYL ETHER	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
BUTYL BENZYL PHTHALATE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
2-CHLORONAPHTHALENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
4-CHLORPHENYL PHENYL ETHER	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
CHRYSENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
DI-N-BUTYL PHTHALATE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
DI-N-OCTYL PHTHALATE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
DIBENZO(A,H) ANTHRACENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
1,2-DICHLOROBENZENE	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
1,3-DICHLOROBENZENE	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
1,4-DICHLOROBENZENE	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
3,3-DICHLOROBENZIDINE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
DIETHYL PHTHALATE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
DIMETHYL PHTHALATE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
2,4-DINITROTOLUENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
2,6-DINITROTOLUENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
1,2-DIPHENYLHYDRAZINE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l

Form Approved 1/14/99 OMB Number 2040-0086

FACILITY NAME AND PERMIT NUMBER:
Emporia WWTP VA0020346

POLLUTANT			IM DAIL IARGE	Υ	A)	VERAGI	EDAILY	DISCH	ARGE		
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples	ANALYTICAL METHOD	ML/ MDL
LUORANTHENE	< 5	ug/l		THE PROPERTY OF THE PROPERTY O	< 5	ug/l			3	EPA 625	5 ug/l
LUORENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
IEXACHLOROBENZENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
IEXACHLOROBUTADIENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
IEXACHLOROCYCLO- ENTADIENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
EXACHLOROETHANE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
NDENO(1,2,3-CD)PYRENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
SOPHORONE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
APHTHALENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
ITROBENZENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
-NITROSODI-N-PROPYLAMINE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
NITROSODI- METHYLAMINE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
NITROSODI-PHENYLAMINE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
HENANTHRENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
/RENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
2,4-TRICHLOROBENZENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
se this space (or a separate sheet) to	provide inf	ormation	on other t	oase-neut	ral compo	unds requ	uested by	the perm	nit writer.		
e this space (or a separate sheet) to		o smooth a s	an att	- B. d							

END OF PART D.

REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM

2A YOU MUST COMPLETE

Emporia WWTP VA0020346

SUPPLEMENTAL APPLICATION INFORMATION

PART D. EXPANDED EFFLUENT TESTING DATA

Refer to the directions on the cover page to determine whether this section applies to the treatment works.

Effluent Testing: 1.0 mgd and Pretreatment Treatment Works. If the treatment works has a design flow greater than or equal to 1.0 mgd or it has (or is required to have) a pretreatment program, or is otherwise required by the permitting authority to provide the data, then provide effluent testing data for the following pollutants. Provide the indicated effluent testing information and any other information required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analyses conducted using 40 CFR Part 136 methods. In addition, these data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. Indicate in the blank rows provided below any data you may have on pollutants not specifically listed in this form. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall number: 001 (Complete once for each outfall discharging effluent to waters of the United States.)

Conc.	Units	HARGE		連つける (空間)						
			Units	Conc.	Units	Mass	Units	Number of Samples	ANALYTICAL METHOD	ML/MDL
, CYANIDE	PHENO	LS, AND	HARDNE	SS.						3
< 5.0	ug/l		in the particular of the parti	<5.0	ug/l			3	EPA 200.7	5.0 ug/l
< 5.0	ug/l			< 5.0	ug/l			3	EPA 200.7	5.0 ug/l
< 0.5	ug/l			< 0.5	ug/l			3	EPA 200.7	0.5 ug/l
1.0	ug/l			0.7	ug/l			3	EPA 200.7	0.5 ug/l
4.0	ug/l			2.3	ug/l			3	EPA 200.7	1.0 ug/l
28.0	ug/l			16.3	ug/l			3	EPA 200.7	2.0 ug/l
< 5.0	ug/l			< 5.0	ug/l			3	EPA 200.7	5.0 ug/l
< 0.2	ug/l			< 0.2	ug/l			3	EPA 245.1	0.2 ug/l
< 5.0	ug/l			< 5.0	ug/l			3	EPA 200.7	5.0 ug/l
< 5.0	ug/l			< 5.0	ug/l			3	EPA 200.7	5.0 ug/l
<1.0	ug/l		3	EPA 200.7	1.0 ug/l					
< 5.0	ug/l	< 5.0 ug/l 3	3	EPA 200.7	5.0 ug/l					
127	ug/l			75.7 ug/l 3 EPA 200.7	5.0 ug/l					
<.005	mg/l			<.005	mg/l			3	EPA 335.4	0.005 mg/l
<0.02	mg/l			< 0.02	mg/l			3	EPA 420.4	0.02 mg/l
339	mg/l			189.9	mg/i			3	SM2340B	.20mg/l
o provide in	ormation	on other	metals red	quested b	y the perr	nit writer.				
	< 5.0 < 5.0 < 0.5 1.0 4.0 28.0 < 5.0 < 5.0 < 1.0 < 5.0 127 < 0.05 < 0.02 339	 < 5.0 ug/l < 5.0 ug/l < 0.5 ug/l 1.0 ug/l 4.0 ug/l < 5.0 ug/l < 1.0 ug/l <	<pre>< 5.0</pre>	<pre>< 5.0</pre>	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

FACILITY NAME AND PERMIT NUMBER: Emporia WWTP VA0020346

Outfall number: 001 POLLUTANT		MAXIMU	M DAIL			***************************************		DISCHA	the United		
	Conc.	DISCI- Units	Mass	Units	Conc.	Units	Mass	Units	Number of	ANALYTICAL METHOD	ML/ MDL
VOLATILE ORGANIC COMPOUNDS	•			(Marie and A					Samples		
ACROLEIN	< 50	ug/i		-	< 50	ug/l			3	EPA 624	50 ug/l
ACRYLONITRILE	< 50	ug/l			< 50	ug/l			3	EPA 624	50 ug/l
BENZENE	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
BROMOFORM	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
CARBON TETRACHLORIDE	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
CLOROBENZENE	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
CHLORODIBROMO-METHANE	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
CHLOROETHANE	< 10	ug/l			< 10	ug/l			3	EPA 624	10 ug/l
2-CHLORO-ETHYLVINYL ETHER	< 10	ug/l			< 10	ug/l			3	EPA 624	10 ug/l
CHLOROFORM	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
DICHLOROBROMO-METHANE	< 5	ug/l			< 5.0	ug/l			3	EPA 624	5 ug/l
1,1-DICHLOROETHANE	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
1,2-DICHLOROETHANE	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
TRANS-1,2-DICHLORO-ETHYLENE	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
1,1-DICHLOROETHYLENE	< 5	ug/l			< 5	ug/l	Annual Control of the		3	EPA 624	5 ug/l
1,2-DICHLOROPROPANE	< 5	ug/l			<5	ug/l	· Constitution in the cons		3	EPA 624	5 ug/l
I,3-DICHLORO-PROPYLENE	< 5	ug/l	A CONTRACTOR OF THE CONTRACTOR		< 5	ug/l		-	3	EPA 624	5 ug/l
ETHYLBENZENE	< 5	ug/l	- Control de la	and the second s	< 5	ug/l			3	EPA 624	5 ug/l
METHYL BROMIDE	< 10	ug/l		- Landania de la companyo de la comp	< 10	ug/l			3	EPA 624	10 ug/l
AETHYL CHLORIDE	< 10	ug/l		Penisaspasopasopasopasopasopasopasopasopasop	< 10	ug/l			3	EPA 624	10 ug/l
METHYLENE CHLORIDE	< 10	ug/l			< 10	ug/l			3	EPA 624	10 ug/l
,1,2,2-TETRACHLORO-ETHANE	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
ETRACHLORO-ETHYLENE	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
OLUENE	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l

Emporia WWTP VA0020346

Outfall number: 001									the United	States.)	
POLLUTANT			JM DAIL HARGE	Υ	A'	VERAGI	E DAILY	DISCH	ARGE		
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples	ANALYTICAL METHOD	ML/MDL
1,1,1-TRICHLOROETHANE	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
1,1,2-TRICHLOROETHANE	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
TRICHLORETHYLENE	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
VINYL CHLORIDE	< 10	ug/l			< 10	ug/l			3	EPA 624	10 ug/l
Use this space (or a separate sheet) t	to provide i	nformatio	on other	volatile o	rganic cor	mpounds	requested	d by the p	ermit writer.		<u> </u>
ACID-EXTRACTABLE COMPOUNDS	<u> </u>									***************************************	
P-CHLORO-M-CRESOL	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
2-CHLOROPHENOL	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
2,4-DICHLOROPHENOL	< 5	ug/l			< 5	ug/l		0,000	3	EPA 625	5 ug/l
2,4-DIMETHYLPHENOL	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
4,6-DINITRO-O-CRESOL	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
2,4-DINITROPHENOL	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
-NITROPHENOL	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
-NITROPHENOL	< 5	ug/l			< 5	ug/l		T-pastella service	3	EPA 625	5 ug/l
PENTACHLOROPHENOL	< 10	ug/l			< 10	ug/l			3	EPA 625	10 ug/l
PHENOL	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
,4,6-TRICHLOROPHENOL	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
se this space (or a separate sheet) to	provide inf	ormation	on other a	acid-extrad	ctable con	npounds i	requested	by the p	ermit writer.		
ASE-NEUTRAL COMPOUNDS.							L				
CENAPHTHENE	< 5	ug/l			< 5	ug/l	Date of the Park	T	3	EPA 625	5 ug/l
CENAPHTHYLENE	< 5	ug/l			< 5	ug/l	- Aller Marie Anna Anna Anna Anna Anna Anna Anna Ann		3	EPA 625	5 ug/l
NTHRACENE	< 5	ug/l		-	< 5	ug/l			3	EPA 625	5 ug/l
ENZIDINE	< 5	ug/l			< 5	ug/l		ления (при при при при при при при при при при	3	EPA 625	5 ug/l
ENZO(A)ANTHRACENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
	 										

FACILITY NAME AND PERMIT NUMBER: Emporia WWTP VA0020346

Outfall number: 001	(Com	olete onc	e for eac	ch outfall	dischar	ging efflu	uent to v	vaters of	the United	States.)	
POLLUTANT			IM DAIL'	Υ	Α	VERAGI	DAILY	DISCH	ARGE		
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples	ANALYTICAL METHOD	ML/ MDL
3,4 BENZO-FLUORANTHENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
BENZO(GHI)PERYLENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
BENZO(K)FLUORANTHENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
BIS (2-CHLOROETHOXY) METHANE	< 5	ug/l			< 5	ug/l	draw W.A. Mars What a second		3	EPA 625	5 ug/l
BIS (2-CHLOROETHYL)-ETHER	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
BIS (2-CHLOROISO-PROPYL) ETHER	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
BIS (2-ETHYLHEXYL) PHTHALATE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
4-BROMOPHENYL PHENYL ETHER	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
BUTYL BENZYL PHTHALATE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
2-CHLORONAPHTHALENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
4-CHLORPHENYL PHENYL ETHER	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
CHRYSENE	< 5	ug/l		***************************************	< 5	ug/l			3	EPA 625	5 ug/l
DI-N-BUTYL PHTHALATE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
DI-N-OCTYL PHTHALATE	< 5	ug/l	NC in the second		< 5	ug/l			3	EPA 625	5 ug/l
DIBENZO(A,H) ANTHRACENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
1,2-DICHLOROBENZENE	< 5	ug/l			< 5	ug/l			3	EPA 624	5 ug/l
,3-DICHLOROBENZENE	< 5	ug/l			< 5	ug/l		AND THE PROPERTY OF THE PROPER	3	EPA 624	5 ug/l
,4-DICHLOROBENZENE	< 5	ug/l			< 5	ug/l		**************************************	3	EPA 624	5 ug/l
,3-DICHLOROBENZIDINE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
DIETHYL PHTHALATE	< 5	ug/l		COMPANIE DE COMPAN	< 5	ug/l			3	EPA 625	5 ug/l
IMETHYL PHTHALATE	< 5	ug/l	**************************************		< 5	ug/l			3	EPA 625	5 ug/l
4-DINITROTOLUENE	< 5	ug/l	Backers		< 5	ug/l			3	EPA 625	5 ug/l
6-DINITROTOLUENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
2-DIPHENYLHYDRAZINE	< 5	ug/l	with the state of	Hermineeppeep	< 5	ug/l			3	EPA 625	5 ug/l

Form Approved 1/14/99 OMB Number 2040-0086

FACILITY NAME AND PERMIT NUMBER:

Emporia WWTP VA0020346

POLLUTANT			IM DAIL` IARGE	Υ	Α)	VERAGI	E DAILY	DISCH	ARGE		
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples	ANALYTICAL METHOD	ML/ MDL
FLUORANTHENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
FLUORENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
HEXACHLOROBENZENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
HEXACHLOROBUTADIENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
HEXACHLOROCYCLO- PENTADIENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
HEXACHLOROETHANE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
NDENO(1,2,3-CD)PYRENE	< 5	ug/l			< 5	ug/i			3	EPA 625	5 ug/l
SOPHORONE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
IAPHTHALENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
IITROBENZENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
I-NITROSODI-N-PROPYLAMINE	< 5	ug/l			< 5	ug/l		**************************************	3	EPA 625	5 ug/l
-NITROSODI- METHYLAMINE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
-NITROSODI-PHENYLAMINE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
HENANTHRENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
YRENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
2,4-TRICHLOROBENZENE	< 5	ug/l			< 5	ug/l			3	EPA 625	5 ug/l
se this space (or a separate sheet) to	provide inf	ormation	on other t	oase-neut	ral compo	unds req	uested by	the pern	nit writer.		
se this space (or a separate sheet) to											· · · · · · · · · · · · · · · · · · ·

END OF PART D.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM
2A YOU MUST COMPLETE

CLIENT: City of Emporia

ATTN: Jim Page

ADDRESS: P.O. Box 551

Emporia, VA 23847

PHONE:

434-634-5682

FAX:

434-634-3703

Special Notes: RE: FORM 2A

SAMPLE COLLECTED BY: CLIENT

GRAB COLLECTION:

Date: 8/19/11

Time: 0847

COMPOSITE COLLECTION:

Start Date: 08/18/11 Time: 0800

End Date: 08/19/11 Time: 0800

PICK UP BY: REED - LL

SAMPLE RECEIPT:

Date: 8/19/11

Time: 1342

NUMBER OF CONTAINERS: 11

SAMPLE CONDITION: ✓ Good ☐ Other (See C-O-C)

REPORT NO: 11-11981 11:18

SAMPLE ID: FINAL EFF. OUTFALL 001

SAMPLE NO: 11-11981

	Method	JRA	Th. 14	T 1 4	Analyst	Data	Time
Parameter	Number	QL	Result	Unit			
Ammonia	*4500NH3D	0.10	< 0.10	mg/L	ARC	8/22/11	0830
Nitrate/Nitrite	353.2	0.05	8.79	mg/L	EFA	8/26/11	1246
Total Kjeldahl Nitrogen	351.2	0.50	1.46	mg/L	LEF	8/31/11	1335
Total Phosphorus	-365.1	0.10	1.21	mg/L	EFA	8/30/11	1016
Total Dissolved Solids	*2540C	10	_1020	mg/L	$^{\prime}$ JW	8/25/11	1510
Oil & Grease HEM	1664A	5.0	< 5.0	mg/L	SDT	8/25/11	1500
√Cyanide	335.4	0.005	< 0.005	mg/L	LEF	8/26/11	1215
Total Recoverable Arsenic	200.7	0.005	< 0.005	mg/L	TLG	8/26/11	1405
√Total Recoverable Beryllium	200.7	0.0005	< 0.0005	mg/L	TLG	8/26/11	1405
Total Recoverable Cadmium	200.7	0.0005	< 0.0005	mg/L	TLG	8/26/11	1405
Total Recoverable Chromium	200.7	0.001	0.001	mg/L	TLG	8/26/11	1405
Total Recoverable Copper	200.7	0.002	0.006	mg/L	TLG	8/26/11	1405
Total Recoverable Lead	200.7	0.005	< 0.005	mg/L	TLG	8/26/11	1405
Total Recoverable Nickel	200.7	0.005	< 0.005	mg/L	TLG	8/26/11	1405
√Votal Recoverable Mercury	245.1	0.0002	< 0.0002	mg/L	LEF	8/29/11	1206
Total Recoverable Selenium	200.7	0.005	< 0.005	mg/L	TLG	8/26/11	1405
Total Recoverable Silver	200.7	0.001	0.001	mg/L	TLG	8/26/11	1405
Total Recoverable Thallium	200.7	0.005	< 0.005	mg/L	TLG	8/26/11	1405
Total Recoverable Zinc	200.7	0.005	0.025	mg/L	TLG	8/26/11	1405
Phenols	420.4	0.02	< 0.02	mg/L	ARC	8/24/11	1004
Total Recoverable Antimony	200.7	0.005	< 0.005	mg/L	TLG	8/26/11	1405
Hardness	*2340B	0.103	230	mg/L	TLG	8/26/11	1405
Semi-Volatiles	20.02						
Hexachloroethane	625	5	< 5	ug/L	CLH	8/29/11	2305
1,2,4-Trichlorobenzene	625	5	< 5	ug/L	CLH	8/29/11	2305
Hexachlorobutadiene	625	5	< 5	ug/L	CLH	8/29/11	2305
Hexachlorocyclopentadiene	625	5	< 5	ug/L	CLH	8/29/11	2305
2-Chloronaphthalene	625	5	< 5	ug/L	CLH	8/29/11	2305
Hexachlorobenzene	625	5	< 5	ug/L	CLH	8/29/11	2305
	625	5	< 5	ug/L	CLH	8/29/11	2305
N-Nitrosodimethylamine	023	J		ugu	V.2.2.1		

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(757) 873-4703 Fax: (757) 873-1498

VELAP# 460013

EPA# VA00015



SAMPLE ID: FINAL EFF. OUTFALL 001

SAMPLE NO: 11-11981

D	Method	JRA	Result	Unit	Analyst	Date	Time
Parameter	Number	QL	Kesuit	UIII	Anaiyst	Date	1 11116
Semi-Volatiles							
Bis(2-chloroethyl) ether	625	5	< 5	ug/L	CLH	8/29/11	2305
Bis(2-chloroisopropyl) ether	625	5	< 5	ug/L	CLH	8/29/11	2305
√N-Nitroso-di-n-propylamine	625	5	< 5	ug/L	CLH	8/29/11	2305
Nitrobenzene	625	5	< 5	ug/L	CLH	8/29/11	2305
Isophorone	625	5	< 5	ug/L	CLH	8/29/11	2305
Bis(2-chloroethoxy)methane	625	5	< 5	ug/L	CLH	8/29/11	2305
Naphthalene	625	5	< 5	ug/L	CLH	8/29/11	2305
Acenaphthylene	625	5	< 5	ug/L	CLH	8/29/11	2305
Dimethyl phthalate	625	5	< 5	ug/L	CLH	8/29/11	2305
2,6-Dinitrotoluene	625	5	< 5	ug/L	CLH	8/29/11	2305
Acenaphthene	625	5	< 5	ug/L	CLH	8/29/11	2305
√2,4-Dinitrotoluene	625	5	< 5	ug/L	CLH	8/29/11	2305
Fluorene	625	5	< 5	ug/L	CLH	8/29/11	2305
4-Chlorophenyl phenyl ether	625	5	< 5	ug/L	CLH	8/29/11	2305
Diethyl phthalate	625	5	< 5	ug/L	CLH	8/29/11	2305
1,2,-Diphenylhydrazine	625	5	< 5	ug/L	CLH	8/29/11	2305
N-nitroso-di-phenylamine	625	5	< 5	ug/L	CLH	8/29/11	2305
4-Bromophenyl phenyl ether	625	5	< 5	ug/L	CLH	8/29/11	2305
Phenanthrene	625	5	< 5	ug/L	CLH	8/29/11	2305
Anthracene	625	5	< 5	ug/L	CLH	8/29/11	2305
di-n-Butyl phthalate	625	5	< 5	ug/L	CLH	8/29/11	2305
Fluoranthene	625	5	< 5	ug/L	CLH	8/29/11	2305
Pyrene	625	5	< 5	ug/L	CLH	8/29/11	2305
Benzidine	625	5	< 5	ug/L	CLH	8/29/11	2305
Butyl benzyl phthalate	625	5	< 5	ug/L	CLH	8/29/11	2305
Benzo[a]Anthracene	625	5	< 5	ug/L	CLH	8/29/11	2305
Chrysene	625	5	< 5	ug/L	CLH	8/29/11	2305
3,3-Dichlorobenzidine	625	5	< 5	ug/L	CLH	8/29/11	2305
Bis(2-ethylhexyl) phthalate	625	5	< 5	ug/L	CLH	8/29/11	2305
Di-n-Octyl phthalate	625	5	< 5	ug/L	CLH	8/29/11	2305
Benzo[b]Fluoranthene	625	5	< 5	ug/L	CLH	8/29/11	2305
Benzo[k]Fluoranthene	625	5	< 5	ug/L	CLH	8/29/11	2305
Benzo[a]Pyrene	625	5	< 5	ug/L	CLH	8/29/11	2305
Indeno[1,2,3-c,d]Pyrene	625	5	< 5	ug/L	CLH	8/29/11	2305
Dibenz[a,h]Anthracene	625	5	< 5	ug/L	CLH	8/29/11	2305
Benzo[g,h,i]Perylene	625	5	< 5	ug/L	CLH	8/29/11	2305
2-Chlorophenol	625	5	< 5	ug/L	CLH	8/29/11	2305
Phenol	625	5	< 5	ug/L	CLH	8/29/11	2305
,	625	5	< 5	ug/L	CLH	8/29/11	2305
√2-Nitrophenol	625	5	< 5	ug/L	CLH	8/29/11	2305
7,4-Dimethylphenol	625	5	< 5	ug/L ug/L	CLH	8/29/11	2305
2,4-Dichlorophenol	625	<i>5</i>	< 5	ug/L	CLH	8/29/11	2305
4-Chloro 3-Methylphenol	625 625	5 5	< 5	ug/L ug/L	CLH	8/29/11	2305
2,4,6-Trichlorophenol	625	20	< 20	ug/L	CLH	8/29/11	2305
√2,4-Dinitrophenol	023	20	~ 20	ugi	CLAI	0 2	2505

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SAMPLE ID: FINAL EFF. OUTFALL 001

SAMPLE NO: 11-11981

	Method	JRA	Result	Unit	Analyst	Date	Time
Parameter	Number	QL	Resuit	UIII	Anaiyst	Date	Time
Semi-Volatiles				~	C7 11	0/20/11	2205
4-Nitrophenol	625	5	< 5	ug/L	CLH	8/29/11	2305
4,6 Dinitro-o-cresol	625	5	< 5	ug/L	CLH	8/29/11	2305
Pentachlorophenol	625	10	< 10	ug/L	CLH	8/29/11	2305
Volatiles							
Chloromethane (Methyl Chloride)	624	10	< 10	ug/L	TAG	8/22/11	1448
Bromomethane	624	10	< 10	ug/L	TAG	8/22/11	1448
Vinyl Chloride	624	10	< 10	ug/L	TAG	8/22/11	1448
Chloroethane	624	5	< 5	ug/L	TAG	8/22/11	1448
Methylene Chloride/Dichloromethan	ne 624	5	< 5	ug/L	TAG	8/22/11	1448
Trichlorofluoromethane	624	Š	< 5	ug/L	TAG	8/22/11	1448
1,1-Dichloroethene	624	5	< 5	ug/L	TAG	8/22/11	1448
1,1-Dichloroethane	624	5	< 5	ug/L	TAG	8/22/11	1448
/gis-1,2-Dichloroethene	624	5	< 5	ug/L	TAG	8/22/11	1448
/Chloroform	624	5	< 5	ug/L	TAG	8/22/11	1448
1,2-Dichloroethane	624	5	< 5	ug/L	TAG	8/22/11	1448
1.1.1-Trichloroethane	624	5	< 5	ug/L	TAG	8/22/11	1448
Carbon Tetrachloride	624	5	< 5	ug/L	TAG	8/22/11	1448
Bromodichloromethane	624	5	< 5	ug/L	TAG	8/22/11	1448
1,1,2,2-Tetrachloroethane	624	5	< 5	ug/L	TAG	8/22/11	1448
1,2-Dichloropropane	624	5	< 5	ug/L	TAG	8/22/11	1448
trans-1,3-Dichloropropene	624	5	< 5	ug/L	TAG	8/22/11	1448
Trichloroethene	624	5	< 5	ug/L	TAG	8/22/11	1448
✓Dibromochloromethane	624	5	< 5	ug/L	TAG	8/22/11	1448
1,1,2-Trichloroethane	624	5	< 5	ug/L	TAG	8/22/11	1448
Benzene	624	5	< 5	ug/L	TAG	8/22/11	1448
Vis-1,3-Dichloropropene	624	5	< 5	ug/L	TAG	8/22/11	1448
	624	10	< 10	ug/L	TAG	8/22/11	1448
2-Chloroethyl vinyl ether	624	5	< 5	ug/L	TAG	8/22/11	1448
Bromoform	624	5	< 5	ug/L	TAG	8/22/11	1448
Tetrachloroethene	624	5	< 5	ug/L	TAG	8/22/11	1448
Toluene		5	< 5	ug/L	TAG	8/22/11	1448
Chlorobenzene/Monochlorobenzene	624	5	< 5	ug/L	TAG	8/22/11	1448
Ethylbenzene	624	50	< 50	ug/L	TAG	8/22/11	1448
Acrolein		50	< 50	ug/L	TAG	8/22/11	1448
Acrylonitrile	624	5	< 5	ug/L	TAG	8/22/11	1448
· 1,3-Dichloropropene(cis & trans)	624	5	< 5	ug/L ug/L	TAG	8/22/11	1448
1,2-Dichlorobenzene	624		< 5	ug/L ug/L	TAG	8/22/11	1448
1,3-Dichlorobenzene	624	5	< 5	ug/L ug/L	TAG	8/22/11	1448
1,4-Dichlorobenzene	624	5		***	TAG	8/22/11	1448
Dichlorodifluoromethane	624	5	< 5	ug/L	TAG	8/22/11	1448
Arans-1,2-Dichloroethene	624	5	< 5	ug/L	IAU	U1 22 21 1 1	1770

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SAMPLE ID: FINAL EFF. OUTFALL 001

SAMPLE NO: 11-11981

Method JRA
Parameter Number QL Result Unit Analyst Date Time

NOTES:

JRA Quantification Level is the concentration of the lowest calibration standard above zero with a reliable signal.

Reproduction of this report is not permitted, except in full, without written approval from James R Reed & Associates.

The results on this report relate only to the sample(s) provided for analysis.

Results conform to NELAC standards, where applicable, unless otherwise indicated.

*SM 20 Ed.

Authorized By:

Elaine Claiborne, Laboratory Director

Claire Clarloin

Date: 07-Sep-11



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Company Contact: Jim Page	Telep	Telephone: 434-634-5682	34-5682					I I			ss										
Results To: Jim Page		Fax: 434-634-3703	34-3703						P		dne										
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Emporia, VA 23847							T.Pl		(HEI		ls*,			25)							
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*WW= Wastewater, GW = Groundwater, DW - Drinking Water, HW - Hazardous Waste, OTHERS	Water, HW -	Hazardous Wa	ste, OTHERS	>					-											1	
				2				1													

11/28/1

Relinquished By: Sampled By:

Date/Time:

Date/Time:

Date/Time: Date/Time:

Date/Time:

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 $5 = Na_2S_2O_3$

CN Interference Check:

Positive Negative

Oxidizing Agent:

Arrival Temp:

 $3 = H_2SO_4 \quad 8 = H_2SO_4 + FAS$ $2 = HNO_3$ 7 = NaOH + ZnOAc

12=Zinc Acetate + NaOH

11=HCl

10=Ascorbic Acid + HCl

1 = <6°C Preservatives:

 $6 = Na_2S_2O_3 + HCI$

 $4 = NaOH 9 = NH_4CI$

Received By: Relinquished By: Received By:

_for Compliance Not for Compliance

*Ab,As,Be,Cd,Cr,Cu,Pb,Ni,Hg,Se,Ag,Tl,Zn

JRA

JAMES R. REED and ASSOCIATES (757) 873-4703; FAX (757) 873-1498 770 Pilot House Drive, Newport News, VA 23606

CLIENT:

City of Emporia

ATTN:

Jim Page

ADDRESS: P.O. Box 551

Emporia, VA 23847

PHONE:

434-634-5682

FAX:

434-634-3703

Special Notes:

RE: FORM 2A

SAMPLE COLLECTED BY: CLIENT

GRAB COLLECTION:

Date: 10/5/11

Time: 0900

COMPOSITE COLLECTION:

Start Date: 10/04/11 Time: 0710

End Date: 10/05/11 Time: 0710

PICK UP BY: REED - LL

SAMPLE RECEIPT:

Date: 10/5/11

Time: 1445

NUMBER OF CONTAINERS: 11

SAMPLE CONDITION: ✓ Good ☐ Other (See C-O-C)

REPORT NO: 11-14316 11:02

SAMPLE ID:

FINAL EFFLUENT OUTFALL 001

SAMPLE NO: 11-14316

70	Method	JRА					
Parameter	Number	QL	Result	Unit	Analyst	Date	Time
Ammonia	*4500NH3D	0.10	< 0.10	mg/L	ARC	10/7/11	1250
Nitrate/Nitrite	353.2	0.05	5.23	mg/L	EFA	10/12/11	1052
Total Kjeldahl Nitrogen	351.2	0.50	3.09	mg/L	LEF	10/6/11	1454
Total Phosphorus	365.1	0.10	1.63	mg/L	EFA	10/17/11	1037
Total Dissolved Solids	*2540C	10	1250	mg/L	JW	10/13/11	1655
Oil & Grease HEM	1664A	5.0	< 5.0	mg/L	SDT	10/7/11	1500
Cyanide	335.4	0.005	< 0.005	mg/L	LEF	10/7/11	1207
Total Recoverable Antimony	200.7	0.005	< 0.005	mg/L	EFA	10/14/11	1354
Total Recoverable Arsenic	200.7	0.005	< 0.005	mg/L	EFA	10/14/11	1354
Total Recoverable Beryllium	200.7	0.0005	< 0.0005	mg/L	EFA	10/14/11	1354
Total Recoverable Cadmium (1)	200.7	0.0005	0.0006	mg/L	EFA	10/14/11	1354
Total Recoverable Chromium	200.7	0.001	0.002	mg/L	EFA	10/14/11	1354
Total Recoverable Copper	200.7	0.002	0.015	mg/L	EFA	10/14/11	1354
Notal Recoverable Lead	200.7	0.005	< 0.005	mg/L	EFA	10/14/11	1354
Total Recoverable Nickel ^v	200.7	0.005	< 0.005	mg/L	EFA	10/14/11	1354
Total Recoverable Mercury /	245.1	0.0002	< 0.0002	mg/L	TLG	10/6/11	1322
√rotal Recoverable Selenium √	200.7	0.005	< 0.005	mg/L	EFA	10/14/11	1354
Total Recoverable Silver	200.7	0.001	0.001	mg/L	EFA	10/14/11	1354
Total Recoverable Thallium	200.7	0.005	< 0.005	mg/L	EFA	10/14/11	1354
Total Recoverable Zinc V	200.7	0.005	0.075	mg/L	EFA	10/14/11	1354
Hardness	*2340B	0.206	339	mg/L	EFA	10/14/11	1421
Phenols	420.4	0.02	< 0.02	mg/L	ARC	10/11/11	1425
Semi-Volatiles				Ū			
Hexachloroethane	625	5	< 5	ug/L	CLH	10/17/11	2113
1,2,4-Trichlorobenzene	625	5	< 5	ug/L	CLH	10/17/11	2113
/Hexachlorobutadiene	625	5	< 5	ug/L	CLH	10/17/11	2113
√Hexachlorocyclopentadiene	625	5	< 5	ug/L	CLH	10/17/11	2113
12-Chloronaphthalene	625	5	< 5	ug/L	CLH	10/17/11	2113
Hexachlorobenzene	625	5	< 5	ug/L	CLH	10/17/11	2113
√N-Nitrosodimethylamine	625	5	< 5	ug/L	CLH	10/17/11	2113

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SAMPLE ID: FINAL EFFLUENT OUTFALL 001

SAMPLE NO: 11-14316

-	Method	JRA	TD 74	WT * 2	A TA	T) - 4 -	m:
Parameter	Number	QL	Result	Unit	Analyst	Date	Time
Semi-Volatiles							
√Bis(2-chloroethyl) ether	625	5	< 5	ug/L	CLH	10/17/11	2113
✓Bis(2-chloroisopropyl) ether	625	5	< 5	ug/L	CLH	10/17/11	2113
✓N-Nitroso-di-n-propylamine	625	5	< 5	ug/L	CLH	10/17/11	2113
√Nitrobenzene	625	5	< 5	ug/L	CLH	10/17/11	2113
Isophorone	625	5	< 5	ug/L	CLH	10/17/11	2113
✓Bis(2-chloroethoxy)methane	625	5	< 5	ug/L	CLH	10/17/11	2113
Naphthalene	625	5	12	ug/L·	CLH	10/17/11	2113
Acenaphthylene	625	5	< 5	ug/L	CLH	10/17/11	2113
Dimethyl phthalate	625	5	< 5	ug/L	CLH	10/17/11	2113
12,6-Dinitrotoluene	625	5	< 5	ug/L	CLH	10/17/11	2113
Acenaphthene	625	5	< 5	ug/L	CLH	10/17/11	2113
√2,4-Dinitrotoluene	625	5	< 5	ug/L	CLH	10/17/11	2113
Fluorene	625	5	< 5	ug/L	CLH	10/17/11	2113
4-Chlorophenyl phenyl ether	625	5	< 5	ug/L	CLH	10/17/11	2113
✓Diethyl phthalate	625	5	< 5	ug/L	CLH	10/17/11	2113
√,2,-Diphenylhydrazine	625	5	< 5	ug/L	CLH	10/17/11	2113
√N-nitroso-di-phenylamine	625	5	< 5	ug/L	CLH	10/17/11	2113
4-Bromophenyl phenyl ether	625	5	< 5	ug/L	CLH	10/17/11	2113
Phenanthrene	625	5	< 5	ug/L	CLH	10/17/11	2113
Anthracene	625	5	< 5	ug/L	CLH	10/17/11	2113
√dį-n-Butyl phthalate	625	5	< 5	ug/L	CLH	10/17/11	2113
Fluoranthene	625	5	5	ug/L	CLH	10/17/11	2113
yrene	625	5	< 5	ug/L	CLH	10/17/11	2113
Benzidine	625	5	< 5	ug/L	CLH	10/17/11	2113
Butyl benzyl phthalate	625	5	< 5	ug/L	CLH	10/17/11	2113
Benzo[a]Anthracene	625	5	< 5	ug/L	CLH	10/17/11	2113
./Chrysene	625	5	< 5	ug/L	CLH	10/17/11	2113
3,3-Dichlorobenzidine	625	5	< 5	ug/L	CLH	10/17/11	2113
√Bis(2-ethylhexyl) phthalate	625	5	< 5	ug/L	CLH	10/17/11	2113
√Di-n-Octyl phthalate	625	5	< 5	ug/L	CLH	10/17/11	2113
Benzo[b]Fluoranthene	625	5	< 5	ug/L	CLH	10/17/11	2113
✓Benzo[k]Fluoranthene	625	5	< 5	ug/L	CLH	10/17/11	2113
Benzo[a]Pyrene	625	5	< 5	ug/L	CLH	10/17/11	2113
Indeno[1,2,3-c,d]Pyrene	625	5	< 5	ug/L	CLH	10/17/11	2113
Dibenz[a,h]Anthracene	625	5	< 5	ug/L	CLH	10/17/11	2113
√Benzo[g,h,i]Perylene	625	5	< 5	ug/L	CLH	10/17/11	2113
7-Chlorophenol	625	5	< 5	ug/L	CLH	10/17/11	2113
Phenol	625	5	< 5	ug/L	CLH	10/17/11	2113
2-Nitrophenol	625	5	< 5	ug/L	CLH	10/17/11	2113
2,4-Dimethylphenol	625	5	< 5	ug/L	CLH	10/17/11	2113
24-Dichlorophenol	625	5	< 5	ug/L	CLH	10/17/11	2113
A-Chloro 3-Methylphenol	625	5	< 5	ug/L	CLH	10/17/11	2113
2,4,6-Trichlorophenol	625	5	< 5	ug/L	CLH	10/17/11	2113
2,4-Dinitrophenol	625	20	< 20	ug/L	CLH	10/17/11	2113

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SAMPLE ID: FINAL EFFLUENT OUTFALL 001

SAMPLE NO: 11-14316

	Method	JRA	10 14	WT24	A ¥4	D - 4 -	/81°
Parameter	Number	QL	Result	Unit	Analyst	Date	Time
Semi-Volatiles							
/4-Nitrophenol	625	5	< 5	ug/L	CLH	10/17/11	2113
4,6 Dinitro-o-cresol	625	5	< 5	ug/L	CLH	10/17/11	2113
Pentachlorophenol	625	10	< 10	ug/L	CLH	10/17/11	2113
Volatiles							
Chloromethane (Methyl Chloride)	624	10	< 10	ug/L	TAG	10/12/11	1510
Bromomethane	624	10	< 10	ug/L	TAG	10/12/11	1510
Winyl Chloride	624	10	< 10	ug/L	TAG	10/12/11	1510
Chloroethane	624	5	< 5	ug/L	TAG	10/12/11	1510
Methylene Chloride/Dichloromethan	e 624	5	< 5	ug/L	TAG	10/12/11	1510
Trichlorofluoromethane	624	5	< 5	ug/L	TAG	10/12/11	1510
1,1-Dichloroethene	624	5	< 5	ug/L	TAG	10/12/11	1510
√1,1-Dichloroethane	624	5	< 5	ug/L	TAG	10/12/11	1510
çis-1,2-Dichloroethene	624	5	< 5	ug/L	TAG	10/12/11	1510
Chloroform	624	5	< 5	ug/L	TAG	10/12/11	1510
1,2-Dichloroethane	624	5	< 5	ug/L	TAG	10/12/11	1510
1,1,1-Trichloroethane	624	5	< 5	ug/L	TAG	10/12/11	1510
Carbon Tetrachloride	624	5	< 5	ug/L	TAG	10/12/11	1510
Bromodichloromethane	624	5	< 5	ug/L	TAG	10/12/11	1510
√1,1,2,2-Tetrachloroethane	624	5.	< 5	ug/L	TAG	10/12/11	1510
1,2-Dichloropropane	624	5	< 5	ug/L	TAG	10/12/11	1510
trans-1,3-Dichloropropene	624	5	< 5	ug/L	TAG	10/12/11	1510
Trichloroethene	624	5	< 5	ug/L	TAG	10/12/11	1510
Dibromochloromethane	624	5	< 5	ug/L	TAG	10/12/11	1510
1,1,2-Trichloroethane	624	5	< 5	ug/L	TAG	10/12/11	1510
Benzene	624	5	< 5	ug/L	TAG	10/12/11	1510
√cis-1,3-Dichloropropene	624	5	< 5	ug/L	TAG	10/12/11	1510
2-Chloroethyl vinyl ether	624	10	< 10	ug/L	TAG	10/12/11	1510
✓Bromoform	624	5	< 5	ug/L	TAG	10/12/11	1510
Tetrachloroethene	624	5	< 5	ug/L	TAG	10/12/11	1510
Toluene	624	5	< 5	ug/L	TAG	10/12/11	1510
✓Chlorobenzene/Monochlorobenzene	624	5	< 5	ug/L	TAG	10/12/11	1510
Ethylbenzene	624	5	< 5	ug/L	TAG	10/12/11	1510
✓Acrolein	624	50	< 50	ug/L	TAG	10/12/11	1510
Acrylonitrile	624	50	< 50	ug/L	TAG	10/12/11	1510
1,3-Dichloropropene(cis & trans)	624	5	< 5	ug/L ug/L	TAG	10/12/11	1510
1,3-Dichlorobenzene	624	5	< 5	ug/L ug/L	TAG	10/12/11	1510
1,3-Dichlorobenzene	624	5	< 5	ug/L ug/L	TAG	10/12/11	1510
1,4-Dichlorobenzene	624 624	5	< 5	ug/L ug/L	TAG	10/12/11	1510
Dichlorodifluoromethane	624 624	<i>5</i>	< 5	ug/L ug/L	TAG	10/12/11	1510
	624 624	<i>5</i>	< 5	ug/L ug/L	TAG	10/12/11	1510
trans-1,2-Dichloroethene	024	J	\ J	ng/L	IAU	10/14/11	1910

James R. Reed & Associates

770 Pilot House Drive, Newport News, VA 23606

(757) 873-4703 • Fax: (757) 873-1498



SAMPLE ID: FINAL EFFLUENT OUTFALL 001

SAMPLE NO: 11-14316

Method JRA
Parameter Number QL Result Unit Analyst Date Time

NOTES:

JRA Quantification Level is the concentration of the lowest calibration standard above zero with a reliable signal.

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The results on this report relate only to the sample(s) provided for analysis.

Results conform to NELAC standards, where applicable, unless otherwise indicated.

*SM 20 Ed.

Authorized By: Claude Claudine

Elaine Claiborne, Laboratory Director

Date: 25-Oct-11



Low Event

ANALYSES REQUESTED ANALYSES REQUESTED NaOH X Dyanide Y Total Rec. Metals*, Hardness 1, 13 1, 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1
--

CLIENT:

City of Emporia

ATTN:

Jim Page

ADDRESS: P.O. Box 551

Emporia, VA 23847

PHONE:

434-634-5682

FAX:

434-634-3703

Special Notes: RE: FORM 2A THIRD EVENT

SAMPLE COLLECTED BY: CLIENT

GRAB COLLECTION:

Date: 10/26/11

Time: 0900

COMPOSITE COLLECTION:

Start Date: 10/25/11 Time: 0900

End Date: 10/26/11 Time: 0900

PICK UP BY: REED - LL

SAMPLE RECEIPT:

Date: 10/26/11

Time: 1437

NUMBER OF CONTAINERS: 7

SAMPLE CONDITION: ☑ Good ☐ Other (See C-O-C)

REPORT NO: 11-15526 16:46

SAMPLE ID:

OUTFALL 001

SAMPLE NO: 11-15526

-	Method	JRA					
Parameter	Number	QL	Result	Unit	Analy	st Date	Time
Nitrate/Nitrite	353.2	0.05	4.61	mg/L	EFA	10/27/11	
Total Kjeldahl Nitrogen	351.2	0.50	4.73	mg/L			1343
Total Phosphorus	365.1	0.10	3.05	mg/L	LEF	11/2/11	1420
Total Dissolved Solids	*2540C	10	420	-	EFA	11/1/11	1011
Oil & Grease HEM	1664A	5.0	< 5.0	mg/L	JW	11/2/11	0850
Cyanide	335.4	0.005		mg/L	SDT	10/31/11	1330
Total Recoverable Antimony	200.7	0.005	< 0.005	mg/L	LEF	11/4/11	1006
Total Recoverable Arsenic	200.7		< 0.005	mg/L	EFA	11/4/11	1557
Total Recoverable Beryllium	200.7	0.005	< 0.005	mg/L	EFA	11/4/11	1557
Total Recoverable Cadmium	200.7	0.0005	< 0.0005	mg/L	EFA	11/4/11	1557
Total Recoverable Chromium		0.0005	0.0010	mg/L	EFA	11/4/11	1557
Total Recoverable Copper	200.7	0.001	0.004	mg/L	EFA	11/4/11	1557
	200.7	0.002	0.028	mg/L	EFA	11/4/11	1557
Total Recoverable Lead	200.7	0.005	< 0.005	mg/L	EFA	11/4/11	1557
Total Recoverable Nickel	200.7	0.005	< 0.005	mg/L	EFA	11/4/11	1557
Total Recoverable Mercury	245.1	0.0002	< 0.0002	mg/L	LEF	11/4/11	1200
Total Recoverable Selenium	200.7	0.005	< 0.005	mg/L	EFA	11/4/11	
Total Recoverable Silver	200.7	0.001	< 0.001	mg/L	EFA	11/4/11	1557
Total Recoverable Thallium	200.7	0.005	< 0.005	mg/L	EFA		1557
Total Recoverable Zinc	200.7	0.005	0.127	mg/L		11/4/11	1557
Phenols	420.4	0.02	< 0.02	_	EFA	11/4/11	1557
			- 0.02	mg/L	ARC	10/31/11	1247

James R. Reed & Associates

770 Pilot House Drive, Newport News, VA 23606

(757) 873-4703 • Fax: (757) 873-1498



									552 WW (2017/19/20) 18/25 0400 10/24 0400	Type*	RA Sample Sample Location Start Start End End	Composite	Third Event	Project ID: Form 2A	Emporia, VA 23847	Address: P.O. Box 551	Results To: Jim Page Fax: 434-634-3703	company Contact: Jim Page Telephone: 434-634-5682	Company Name: City of Emporia							
									1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	of con	Date Time Total#	Grab		Automation .					Pres.	Bottle I.D						
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															13'										******	

	for Compliance Not for Compliance *Sb,As,Be,Cd,Cr,Cu,Pb,Ni,Hg,Se,Ag,Tl,Zn	Received By: Manuel Lond Date/Time: 10-10-4	Received By: Compared by: Compa	By: Cone of Cone of	Sampled By: Date/Time: /DAR/	*WW= Wastewater, GW = Groundwater, DW - Drinking Water, HW - Hazardous Waste, OTHERS
Arrival Temp: 1.4 oC	CN Interference Check: Positive Negative Sulfide: Oxidizing Agent:	$5 = Na_2S_2O_3$	$\frac{1}{1} \frac{1}{1} \frac{1}{2} \frac{1}{3} = H_2SO_4 + FAS \qquad 12=Zinc Acetate + NaOH$ $\frac{1}{1} \frac{1}{1} \frac{1}{3} \frac{1}{3} \frac{1}{3} \qquad 4 = NaOH \qquad 9 = NH_4CI$	ถ	Preservatives: $1 = <6^{\circ}C$ $6 = Na_3S_2O_3 + HC!$ $10 = Ascorbic Acid + HC!$	ρ

JAMES R. REED and ASSOCIATES (757) 873-4703; FAX (757) 873-1498 770 Pilot House Drive, Newport News, VA 23606

ATTACHMENT A DEPARTMENT OF ENVIRONMENTAL QUALITY WATER QUALITY CRITERIA MONITORING

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL ⁽¹⁾	REPORTING RESULTS	SAMPLE TYPE ⁽²⁾	SAMPLE FREQUENCY
		META	ALS			
7440-36-0	Antimony, dissolved	(3)	1.4	0.60 ug/l	G or 🔘	1/5 YR
7440-38-2	Arsenic, dissolved	(3)	1.0	0.69 ug/l	G or 🕖	1/5 YR
7440-43-9	Cadmium, dissolved	(3)	0.3	0.33 ug/l	G or C	1/5 YR
16065-83-1	Chromium III, dissolved (8)	(3)	3.6	0.50 ug/l	G or (C)	1/5 YR
18540-29-9	Chromium VI, dissolved (8)	(3)	1.6	0.50 ug/l	G or C	1/5 YR
7440-50-8	Copper, dissolved	(3)	0.50	5.6 ug/l	G or C	1/5 YR
7439-92-1	Lead, dissolved	(3)	0.50	0.50 ug/l	G or (C)	1/5 YR
7439-97-6	Mercury, dissolved	(3)	1.0	< ug/l	G or (C)	1/5 YR
7440-02-0	Nickel, dissolved	(3)	0.94	2.3 ug/l	G or ©	1/5 YR
7782-49-2	Selenium, Total Recoverable	(3)	2.0	< 5.0 ug/l	G or (C)	1/5 YR
7440-22-4	Silver, dissolved	(3)	0.20	< 0.5 ug/l	G or ©	1/5 YR
7440-28-0	Thallium, dissolved	(4)	(5)	< 0.10 ug/l	G or 6	1/5 YR
7440-66-6	Zinc, dissolved	(3)	3.6	47.0 ug/l	G or ©	1/5 YR
		PESTICIDE	S/PCB'S			
309-00-2	Aldrin	608	0.05	< .005 ug/l	G or(Ĉ)	1/5 YR
57-74-9	Chlordane	608	0.2	< 0.2 ug/l	G or(Ĉ)	1/5 YR
2921-88-2	Chlorpyrifos (synonym = Dursban)	(4)	(5)	< 0.2 ug/l	G or (Ĉ)	1/5 YR
72-54-8	DDD	608	0.1	< 0.1 ug/l	G or C	1/5 YR
72-55-9	DDE	608	0.1	< 0.4 ug/l	G or (C)	1/5 YR
50-29-3	DDT	608	0.1	< 0.1 ug/l	G or (Ĉ)	1/5 YR
8065-48-3	Demeton	(4)	(5)	< 1.0 ug/l	G or (É)	1/5 YR
333-41-5	Diazinon	(4)	(5)	< 1.0 ug/l	G or (C)	1/5 YR
60-57-1	Dieldrin	608	0.1	< .005 ug/l	G or ©	1/5 YR
959-98-8	Alpha-Endosulfan	608	0.1	< 0.1 ug/l	G or C	1/5 YR
33213-65-9	Beta-Endosulfan	608	0.1	< .04 ug/l	G or (C)	1/5 YR
1031-07-8	Endosulfan Sulfate	608	0.1	< .01 ug/l	G or C	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL ⁽¹⁾	REPORTING RESULTS	SAMPLE TYPE ⁽²⁾	SAMPLE FREQUENCY
72-20-8	Endrin	608	0.1	< 0.1 ug/l	G or (C)	1/5 YR
7421-93-4	Endrin Aldehyde	(4)	(5)	< 0.2 ug/l	G or (C)	1/5 YR
86-50-0	Guthion	(4)	(5)	< 1.0 ug/l	G or C	1/5 YR
76-44-8	Heptachlor	608	0.05	< 0.05 ug/l	G or C	1/5 YR
1024-57-3	Heptachlor Epoxide	(4)	(5)	< 0.2 ug/l	G or C	1/5 YR
319-84-6	Hexachlorocyclohexane Alpha-BHC	608	(5)	< 0.02 ug/l	G or (C)	1/5 YR
319-85-7	Hexachlorocyclohexane Beta-BHC	608	(5)	< 0.05 ug/l	G or (C)	1/5 YR
58-89-9	Hexachlorocyclohexane Gamma-BHC or Lindane	608	(5)	< 0.02 ug/i	G or C	1/5 YR
143-50-0	Kepone	(9)	(5)	ND ug/l	G or C	1/5 YR
121-75-5	Malathion	(4)	(5)	< 1.0 ug/l	G or ©	1/5 YR
72-43-5	Methoxychlor	(4)	(5)	2.0 ug/l	G or (C)	1/5 YR
2385-85-5	Mirex	(4)	(5)	< 0.1 ug/l	G or(Ĉ)	1/5 YR
56-38-2	Parathion	(4)	(5)	< 1.0 ug/l	G or (C)	1/5 YR
1336-36-3	PCB Total	608	7.0	< 1.0 ug/l< 5.0 ug/l	G or ©	1/5 YR
8001-35-2	Toxaphene	608	5.0	< 3.0 ug/l	G or(C)	1/5 YR
	BASE NE	UTRAL E	XTRACTAE	BLES		
83-32-9	Acenaphthene	625	10.0	< 5.0 ug/l	G or \redcolor{b}	< 5.0 ug/l 1/5 YR
120-12-7	Anthracene	625	10.0	< 5.0 ug/l	G or C	1/5 YR
92-87-5	Benzidine	(4)	(5)	< 5.0 ug/l	G or (C)	1/5 YR
56-55-3	Benzo (a) anthracene	625	10.0	< 5.0 ug/l	G or (C)	1/5 YR
205-99-2	Benzo (b) fluoranthene	625	10.0	< 5.0 ug/l	G or Ĉ	1/5 YR
207-08-9	Benzo (k) fluoranthene	625	10.0	< 5.0 ug/l	G or (C)	1/5 YR
50-32-8	Benzo (a) pyrene	625	10.0	< 5.0 ug/l	G or $\widehat{\mathcal{C}}$	1/5 YR
111-44-4	Bis 2-Chloroethyl Ether	(4)	(5)	< 5.0 ug/l	G or(Ĉ)	1/5 YR
108-60-1	Bis 2-Chloroisopropyl Ether	(4)	(5)	< 5.0 ug/l<	G or (C)	1/5 YR
85-68-7	Butyl benzyl phthalate	625	10.0	< 5.0 ug/l	G or (6)	1/5 YR
91-58-7	2-Chloronaphthalene	(4)	(5)	< 5.0 ug/l	G or ©	1/5 YR
218-01-9	Chrysene	625	10.0	< 5.0 ug/l	G or C	1/5 YR
53-70-3	Dibenz(a,h)anthracene	625	20.0	< 5.0 ug/l	G or \hat{Q}	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL ⁽¹⁾	REPORTING RESULTS	SAMPLE TYPE ⁽²⁾	SAMPLE FREQUENCY
84-74-2	Dibutyl phthalate (synonym = Di-n-Butyl Phthalate)	625	10.0	< 5.0 ug/l	G or C	1/5 YR
95-50-1	1,2-Dichlorobenzene	624	10.0	ND	∕G)or C	1/5 YR
541-73-1	1,3-Dichlorobenzene	624	10.0	ND	G or C	1/5 YR
106-46-7	1,4-Dichlorobenzene	624	10.0	ND	/G or C	1/5 YR
91-94-1	3,3-Dichlorobenzidine	(4)	(5)	< 5.0 ug/l	G or C	1/5 YR
84-66-2	Diethyl phthalate	625	10.0	< 5.0 ug/l	G or C	1/5 YR
117-81-7	Bis-2-ethylhexyl phthalate	625	10.0	< 5.0 ug/l	G or C	1/5 YR
131-11-3	Dimethyl phthalate	(4)	(5)	< 5.0 ug/l	G or $\widehat{\mathcal{C}}$	1/5 YR
121-14-2	2,4-Dinitrotoluene	625	10.0	< 5.0 ug/l	G or C	1/5 YR
122-66-7	1,2-Diphenylhydrazine	(4)	(5)	< 5.0 ug/l	G or C	1/5 YR
206-44-0	Fluoranthene	625	10.0	< 5.0 ug/l	G or(C)	1/5 YR
86-73-7	Fluorene	625	10.0	< 5.0 ug/l	G or C	1/5 YR
118-74-1	Hexachlorobenzene	(4)	(5)	< 5.0 ug/l	G or C	1/5 YR
87-68-3	Hexachlorobutadiene	(4)	(5)	< 5.0 ug/l	G or C	1/5 YR
77-47-4	Hexachlorocyclopentadiene	(4)	(5)	< 5.0 ug/l	G or C	1/5 YR
67-72-1	Hexachloroethane	(4)	(5)	< 5.0 ug/l	G or C	1/5 YR
193-39-5	Indeno(1,2,3-cd)pyrene	625	20.0	< 5.0 ug/l	G or C	1/5 YR
78-59-1	Isophorone	625	10.0	< 5.0 ug/l	G or C	1/5 YR
98-95-3	Nitrobenzene	625	10.0	< 5.0 ug/l	G or C	1/5 YR
62-75-9	N-Nitrosodimethylamine	(4)	(5)	< 5.0 ug/l	G or (C)	1/5 YR
621-64-7	N-Nitrosodi-n-propylamine	(4)	(5)	< 5.0 ug/l	G or (C)	1/5 YR
86-30-6	N-Nitrosodiphenylamine	(4)	(5)	< 5.0 ug/l	G or (Ĉ)	1/5 YR
129-00-0	Pyrene	625	10.0	< 5.0 ug/l	G or Ĉ	1/5 YR
120-82-1	1,2,4-Trichlorobenzene	625	10.0	< 5.0 ug/l	G or C	1/5 YR
		VOLATI	LES		<u>VL</u>	
107-02-8	Acrolein	(4)	(5)	ND	G	1/5 YR
107-13-1	Acrylonitrile	(4)	(5)	ND	G	1/5 YR
71-43-2	Benzene	624	10.0	ND	G	1/5 YR
75-25-2	Bromoform	624	10.0	ND	G	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL ⁽¹⁾	REPORTING RESULTS	SAMPLE TYPE ⁽²⁾	SAMPLE FREQUENCY
56-23-5	Carbon Tetrachloride	624	10.0	ND	G	1/5 YR
108-90-7	Chlorobenzene (synonym = monochlorobenzene)	624	50.0	ND	G	1/5 YR
124-48-1	Chlorodibromomethane	624	10.0	ND	G	1/5 YR
67-66-3	Chloroform	624	10.0	ND	G	1/5 YR
75-09-2	Dichloromethane (synonym = methylene chloride)	624	20.0	ND	G	1/5 YR
75-27-4	Dichlorobromomethane	624	10.0	ND	G	1/5 YR
107-06-2	1,2-Dichloroethane	624	10.0	ND	G	1/5 YR
75-35-4	1,1-Dichloroethylene	624	10.0	ND	G	1/5 YR
156-60-5	1,2-trans-dichloroethylene	(4)	(5)	ND	G	1/5 YR
78-87-5	1,2-Dichloropropane	(4)	(5)	ND	G	1/5 YR
542-75-6	1,3-Dichloropropene	(4)	(5)	ND	G	1/5 YR
100-41-4	Ethylbenzene	624	10.0	ND	G	1/5 YR
74-83-9	Methyl Bromide	(4)	(5)	ND	G	1/5 YR
79-34-5	1,1,2,2-Tetrachloroethane	(4)	(5)	ND	G	1/5 YR
127-18-4	Tetrachloroethylene	624	10.0	ND	G	1/5 YR
10-88-3	Toluene	624	10.0	ND	G	1/5 YR
79-00-5	1,1,2-Trichloroethane	(4)	(5)	ND	G	1/5 YR
79-01-6	Trichloroethylene	624	10.0	ND	G	1/5 YR
75-01-4	Vinyl Chloride	624	10.0	ND	G	1/5 YR
	ACII	D EXTRAC	TABLES (6)			
95-57-8	2-Chlorophenol	625	10.0	< 5.0 ug/l	G or(C)	1/5 YR
120-83-2	2,4 Dichlorophenol	625	10.0	< 5.0 ug/l	G or C	1/5 YR
105-67-9	2,4 Dimethylphenol	625	10.0	< 5.0 ug/l	G or C	1/5 YR
51-28-5	2,4-Dinitrophenol	(4)	(5)	< 20.0 ug/l	G or C	1/5 YR
534-52-1	2-Methyl-4,6-Dinitrophenol	(4)	(5)	< 5.0 ug/l	G or (C)	1/5 YR
25154-52-3	Nonylphenol	(5)	(5)	< 5.0 ug/l	G or ©	1/5 YR
87-86-5	Pentachlorophenol	625	50.0	< 10.0 ug/l	G or (Č)	1/5 YR
108-95-2	Phenol	625	10.0	< 5.0 ug/l	G or (C)	1/5 YR
88-06-2	2,4,6-Trichlorophenol	625	10.0	< 5.0 ug/l	G or 🐑	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL ⁽¹⁾	REPORTING RESULTS	SAMPLE TYPE ⁽²⁾	SAMPLE FREQUENC		
MISCELLANEOUS								
776-41-7	Ammonia as NH3-N	350.1	200	0.10 mg/l	С	1/5 YR		
16887-00-6	Chlorides	(4)	(5)	67.9 mg/l	С	1/5 YR		
7782-50-5	Chlorine, Total Residual	(4)	100	0.10 mg/l	G	1/5 YR		
57-12-5	Cyanide, Free	(4)	10.0	< 5.0 ug/l	G	1/5 YR		
N/A	E. coli / Enterococcus (N/CML)	(4)	(5)	22 N/CML	G	1/5 YR		
7783-06-4	Hydrogen Sulfide	(5)	(5)	< 20.0 ug/l	G	1/5 YR		
60-10-5	Tributyltin (7)	NBSR 85-3295	(5)	ND	G or Ĉ	1/5 YR		
	Hardness (mg/L as CaCO ₃)	(4)	(5)	101 mg/l	G or (C) (10)	1/5 YR		

** Analyses performed by plant laboratory.

Brian S. Thrower, C.ty Manager
Name of Brincipal Exec. Officer or Authorized Agent/Title

Signature of Principal Officer or Authorized Agent/Date

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. Sec. 1001 and 33 U.S.C. Sec. 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)

FOOTNOTES:

(1) Quantification level (QL) is defined as the lowest concentration used for the calibration of a measurement system when the calibration is in accordance with the procedures published for the required method.

The quantification levels indicated for the metals are actually Specific Target Values developed for this permit. The Specific Target Value is the approximate value that may initiate a wasteload allocation analysis. Target values are not wasteload allocations or effluent limitations. The Specific Target Values are subject to change based on additional information such as hardness data, receiving stream flow, and design flows.

Units for the quantification level are micrograms/liter unless otherwise specified.

Quality control and quality assurance information shall be submitted to document that the required quantification level has been attained.

(2) Sample Type

G = Grab = An individual sample collected in less than 15 minutes. Substances specified with "grab" sample type shall only be collected as grabs. The permittee may analyze multiple grabs and report

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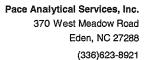
the average results provided that the individual grab results are also reported. For grab metals samples, the individual samples shall be filtered and preserved immediately upon collection.

C = Composite = A 24-hour (PW - Revise as required to require same composite duration as BOD₅) composite unless otherwise specified. The composite shall be a combination of individual samples, taken proportional to flow, obtained at hourly or smaller time intervals. The individual samples may be of equal volume for flows that do not vary by +/- 10 percent over a 24-hour period.

(3) A specific analytical method is not specified; however a target value for each metal has been established. An appropriate method to meet the target value shall be selected from the following list of EPA methods (or any approved method presented in 40 CFR Part 136). If the test result is less than the method QL, a "<[QL]" shall be reported where the actual analytical test QL is substituted for [QL].

<u>Metal</u>	Analytical Method
Antimony	1638; 1639
Arsenic	1632
Chromium ⁽⁸⁾	1639
Cadmium	1637; 1638; 1639; 1640
Chromium VI	1639
Copper	1638; 1640
Lead	1637; 1638; 1640
Mercury	1631
Nickel	1638; 1639; 1640
Selenium	1638; 1639
Silver	1638
Zinc	1638; 1639

- (4) Any approved method presented in 40 CFR Part 136.
- (5) The QL is at the discretion of the permittee. For any substances addressed in 40 CFR Part 136, the permittee shall use one of the approved methods in 40 CFR Part 136.
- (6) Testing for phenols requires continuous extraction.
- (7) Analytical Methods: NBSR 85-3295 or DEQ's approved analysis for Tributyltin may also be used [See A Manual for the Analysis of Butyltins in Environmental Systems by the Virginia Institute of Marine Science, dated November 1996].
- (8) Both Chromium III and Chromium VI may be measured by the total chromium analysis. If the result of the total chromium analysis is less than or equal to the lesser of the Chromium III or Chromium VI method QL, the results for both Chromium III and Chromium VI can be reported as "<[QL]", where the actual analytical test QL is substituted for [QL].
- (9) The lab may use SW846 Method 8270D provided the lab has an Initial Demonstration of Capability, has passed a PT for Kepone, and meets the acceptance criteria for Kepone as given in Method
- (10) The sample type for Hardness (as CaCO₃) shall match the sample type selected for Dissolved Metals





SAMPLE ANALYTE COUNT

Project:

Water Quality Criteria

Pace Project No.: 9273354

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
9273354001	Outfall 001 Final Effluent	EPA 200.7	JMW	2	PASI-A
		SM 2340B	JMW	1	PASI-A
		EPA 200.8	RJS	11	PASI-M
		EPA 245.1	TEM	1	PASI-M
		EPA 8270	BPJ	7	PASI-C
		SM 4500-CI-E	JDA	1	PASI-A
9273354002	Outfall 001 Final Effluent	SM 3500-Cr D	KPP	1	PASI-E
		EPA 624	MCK	29	PASI-C



ANALYTICAL RESULTS

Project:

Water Quality Criteria

Pace Project No.: 9273354

Sample: Outfall 001 Final Effluent	Lab ID: 9273354001	Collected: 07/13/	10 09:20	Received: 07	/14/10 09:20 N	airix: water	
Parameters	Results Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP	Analytical Method: EPA	200.7 Preparation M	ethod: E	PA 200.7			
Calcium	31500 ug/L	100	1		07/27/10 17:47		
Magnesium	5380 ug/L	100	1	07/26/10 12:55	07/27/10 17:47	7439-95-4	
2340B Hardness, Total (Calc.)	Analytical Method: SM 2	340B					
Total Hardness	101 mg/L	0.65	1		07/27/10 17:47		
200.8 MET ICPMS, Dissolved	Analytical Method: EPA	200.8					
Antimony, Dissolved	0.60 ug/L	0.50	1		07/26/10 16:56		
Arsenic, Dissolved	0.69 ug/L	0.50	. 1		07/26/10 16:56		
Cadmium, Dissolved	0.33 ug/L	0.080	1.		07/26/10 16:56		
Chromium, Dissolved —	0.50 ug/L	0.50	1		07/26/10 16:56		
Copper, Dissolved	5.6 ug/L	0.50	1		07/26/10 16:56		
Lead, Dissolved	0.50 ug/L	0.10	1		07/26/10 16:56		
Nickel, Dissolved	2.3 ug/L	0.50	1	07/21/10 14:43	07/26/10 16:56	7440-02-0	
Selenium, Dissolved	ND ug/L	0.50	1	07/21/10 14:43	07/26/10 16:56	7782-49-2	
Silver, Dissolved	ND ug/L	0.50	1	07/21/10 14:43	07/26/10 16:56	7440-22-4	
Thallium, Dissolved	ND ug/L	0.10	1	07/21/10 14:43	07/26/10 16:56	7440-28-0	
Zinc, Dissolved	47.0 ug/L	5.0	1	07/21/10 14:43	07/26/10 16:56	7440-66-6	
245.1 Mercury, Dissolved	Analytical Method: EPA	245.1					
Mercury, Dissolved	ND ug/L	0.20	1	07/20/10 18:26	07/21/10 14:55	7439-97-6	
8270 MSSV Semivolatile Organic	Analytical Method: EPA	8270 Preparation M	ethod: E	PA 3510			
Kepone	ND ug/L	50.0	1	07/16/10 08:30	07/22/10 15:04	143-50-0	
Nitrobenzene-d5 (S)	30 %	21-110	1	07/16/10 08:30	07/22/10 15:04	4165-60-0	
2-Fluorobiphenyl (S)	34 %	27-110	1		07/22/10 15:04		
Terphenyl-d14 (S)	57 %	31-107	1	07/16/10 08:30	07/22/10 15:04	1718-51-0	
Phenol-d6 (S)	11 %	10-110	1	07/16/10 08:30	07/22/10 15:04	13127-88-3	
2-Fluorophenol (S)	19 %	12-110	1	07/16/10 08:30	07/22/10 15:04	367-12-4	
2,4,6-Tribromophenol (S)	56 %	27-110	1	07/16/10 08:30	07/22/10 15:04	118-79-6	
4500 Chloride	Analytical Method: SM 4	500-CI-E					
Chloride	67.9 mg/L	10.0	2		07/27/10 13:57	16887-00-6	
Sample: Outfall 001 Final Effluent	Lab ID: 9273354002	Collected: 07/13/	/10 13:1	5 Received: 07	7/14/10 09:20 N	fatrix: Water	
Parameters	Results Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
		***************************************	****			ue outscharkenderscharkenderscharkenderscharkenderscharkenderscharkenderscharkenderscharkenderscharkenderschar	
Chromium, Hexavalent	Analytical Method: SM 3		_		om/4 4/2 0 10 ==	10510.00	
Chromium, Hexavalent	ND mg/L	0.050	1		07/14/10 12:55	18540-29-9	
624 Volatile Organics	Analytical Method: EPA	624					
Acrolein	ND ug/L	100	1		07/26/10 12:57	107-02-8	
Acrylonitrile	ND ug/L	100			07/26/10 12:57	107-13-1	
Benzene	ND ug/L	5.0			07/26/10 12:57		
	•			1 VOIO			Page 4 of 1
Date: 08/03/2010 01:50 PM	REPORT C	F LABORATOR	YANA	VL Y SIS			Page 4 of 1



ANALYTICAL RESULTS

Project:

Water Quality Criteria

Pace Project No.:

Date: 08/03/2010 01:50 PM

9273354

Sample: Outfall 001 Final Effluent	Lab ID: 9273	354002	Collected: 07/13	/10 13:15	Received: (07/14/10 09:20	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qua
624 Volatile Organics	Analytical Meth	od: EPA 6	24					
Bromochloromethane	ND ug/l	L	5.0	1		07/26/10 12:5		
Bromodichloromethane	ND ug/l	L	5.0	1		07/26/10 12:5		
Bromoform	ND ug/l	L	5.0	1		07/26/10 12:5		
Bromomethane	ND ug/l	L	10.0	1		07/26/10 12:5	74-83-9	
Carbon tetrachloride	ND ug/l	L	5.0	1		07/26/10 12:5	7 56-23-5	
Chlorobenzene	ND ug/l		5.0	1		07/26/10 12:5	7 108-90-7	
Chloroform	ND ug/l	L	5.0	1		07/26/10 12:5	7 67-66-3	
Dibromochloromethane	ND ug/l		5.0	1		07/26/10 12:5	7 124-48-1	
1.2-Dichloroethane	ND ug/l		5.0	1		07/26/10 12:5	7 107-06-2	
1,1-Dichloroethene	ND ug/l		5.0	1		07/26/10 12:5	75-35-4	
trans-1,2-Dichloroethene	ND ug/l		5.0	1		07/26/10 12:5	7 156-60-5	
1,2-Dichloropropane	ND ug/l		5.0) 1		07/26/10 12:5	78-87-5	
cis-1,3-Dichloropropene	ND ug/		5.0	1		07/26/10 12:5	7 10061-01-5	
trans-1,3-Dichloropropene	ND ug/		5.0) 1		07/26/10 12:5	7 10061-02-6	
Ethylbenzene	ND ug/		5.0) 1		07/26/10 12:5	7 100-41-4	
Methylene Chloride	ND ug/		5.0) 1		07/26/10 12:5	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/		5.0) 1		07/26/10 12:5	79-34-5	
Tetrachloroethene	ND ug/		5.0) 1		07/26/10 12:5	7 127-18-4	
Toluene	ND ug/		5.0) 1		07/26/10 12:5	7 108-88-3	
1,1,2-Trichloroethane	ND ug/		5.0) 1		07/26/10 12:5	79-00-5	
Trichloroethene	ND ug/		5.0) 1		07/26/10 12:5	79-01-6	
Vinyl chloride	ND ug/		5.0) 1		07/26/10 12:5	75-01-4	
Dibromofluoromethane (S)	108 %		88-110	3 1		07/26/10 12:5	7 1868-53-7	
4-Bromofluorobenzene (S)	94 %		86-11	1		07/26/10 12:5	7 460-00-4	
Toluene-d8 (S)	101 %		92-10			07/26/10 12:5	7 2037-26-5	
1,2-Dichloroethane-d4 (S)	112 %		70-130) 1		07/26/10 12:5	7 17060-07-0	

Aug 03 2010 12:31PM

REPORT OF ANALYSIS

CLIENT:

Pace Analytical Eden

ATTN:

Tammie Easter

ADDRESS:

PHONE:

370 West Meadow Road Eden, NC 27288

336-623-8921

FAX:

tammie.easter@pacelabs.com

Special Notes:

SAMPLE COLLECTED BY: CLIENT

GRAB COLLECTION:

Date: 7/13/10

Time: 1315 COMPOSITE COLLECTION:

Start Date:

Time:

End Date: PICK UP BY: FEDERAL EXPRESS

Time:

SAMPLE RECEIPT:

Date: 7/15/10

Time: 0955

NUMBER OF CONTAINERS: 2

SAMPLE CONDITION: ☐ Good ☐ Other (See C-O-C)

SAMPLE ID:

OUTFALL 001 FINAL EFFLUENT

SAMPLE NO: 10-11643

	Parameter	Method Number	JRA QL ·	Resuit	Unit	Analyst	Date	Time
944	Free Cyanide /	*4500CNH	0.005	< 0.005	mg/L	LEF	7/21/10	1250
	Hydrogen Sulfide	*4500S2H	0.02	< 0.02	mg/L	EFA	7/16/10	1115
	pH (lab)	*4500H+B		8.00@220oC	S.U.	JGM	7/15/10	1324
	Conductivity	*2510B	2	616	umhos/cm@	JGM	7/15/10	1306

NOTES:

JRA Quantification Level is the concentration of the lowest calibration standard above zero with a reliable signal.

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*SM 20 Ed.

RESPECTFULLY SUBMITTED

Elaine Claiborne

Laboratory Director

Date: 29-Jul-10

REPORT OF ANALYSIS

CLIENT:

Pace Analytical Eden

ATTN:

Tammie Easter

ADDRESS: 470 West Meadow Road

Eden, NC 27288 336-623-8921

PHONE: FAX:

tammie.easter@pacelabs.com

Special Notes:

SAMPLE COLLECTED BY: CLIENT

GRAB COLLECTION:

Date: 7/13/10

Time: 0920

COMPOSITE COLLECTION:

Start Date:

Time:

End Date:

Time:

PICK UP BY: FEDERAL EXPRESS

SAMPLE RECEIPT:

Date: 7/15/10

Time: 0955

NUMBER OF CONTAINERS: 2

SAMPLE CONDITION: ☑ Good ☐ Other (See C-O-C)

SAMPLE ID: **OUTFALL 001 FINAL EFFLUENT**

SAMPLE NO: 10-11642

Parameter	Method	JRA	•			The state of the s	
	Namber	QL	Result	Unit	Analyst	Date	Time
Nonylphenol	625M	5	< 5	ug/L	CLH	7/29/10	0129
Organophosphorous Pesticides							- 1
Demeton 🗸	622	1.	< 1	ug/L	DLL	7/19/10	1655
Malathion /	622	1	< 1	սց/Լ	DLL	7/19/10	1655
Chlorpyrifos	622	0.2	< 0.2	ug/L	DLL	7/19/10	1655
Parathion /	622	1	<	ug/L	DLL	7/19/10	1655
Guthion 🗡	622	1	<1	ug/L	DLL	7/19/10	1655
Diazinon 🗸	622	1	< 1	ug/L	DLL	7/19/10	1655
Semi-Volatiles							
Hexachloroethane	625	· 5	< 5	ug/L	CLH	7/27/10	1950
1,2,4-Trichlorobenzene	625	5	< 5	ug/L	CLH	7/27/10	1950
Hexachlorobutadiene	625	. 5	< 5	ug/L	CLH	7/27/10	1950
Hexachlorocyclopentadiene	625	· 5	< 5	ug/L	CLH	7/27/10	1950
2-Chloronaphthalene	625	5	< 5	ug/L	CLH	7/27/10	1950
Hexachlorobenzene	625	5	< 5	ug/L	CLH	7/27/10	1950
N-Nitrosodimethylamine	625	5	< 5	ug/L	CLH	7/27/10	1950
Bis(2-chloroethyl) ether 🎺 🔍	625	5	< 5	ug/L	CLH	7/27/10	1950
Bis(2-chloroisopropyl) ether	625	5	< 5	ug/L	CLH	7/27/10	1950
N-Nitroso-di-n-propylamine	. 625	5	< 5	ug/L	CLH	7/27/10	1950
Nitrobenzene	625	5	< 5 .	ug/L	CLH	7/27/10	1950
Isophorone	625	5	< 5	ug/L	CLH	7/27/10	1950
Dimethyl phthalate	625	5	< 5	ug/L	CLH	7/27/10	1950
Acenaphthene /	625	5	< 5	ug/L	CLH	7/27/10	1950
2,4-Dinitrotoluene	625	5	< 5	ug/L	CLH	7/27/10	1950
Fluorene	625	5	< 5	ug/L	CLH	7/27/10	1950
Diethyl phthalate	625	5	< 5	ug/L	CLH	7/27/10	1950
1,2,-Diphenylhydrazine	625	5	< 5	ug/L	CLH	7/27/10	1950
N-nitroso-di-phenylamine	625	5	< 5	ug/L	CLH	7/27/10	1950
Anthracene 🗸	625	5	< 5	ug/L	CLH	7/27/10	1950
di-n-Butyl phthalate √	625	5 :	₹ 5	ug/L	CLH	7/27/10	1950
Fluoranthene	625	5	< 5	ug/L	CLH	7/27/10	1950
Pyrene	625	5	< 5	ug/L	CLH	7/27/10	1950
Benzidine /	625	5	< 5	u g/L	CLH	7/27/10	1950
Butyl benzyl phthalate 🗸	625	S	< 5	ug/L		7/27/10	1950
Benzo(a)Anthracene	625	5	< 5	ug/L	CLH	7/27/10	1950

James R. Reed & Associates • 770 Pilot House Drive, Newport News, VA 23606

• (757) 873-4703 • Fax: (757) 873-1498

Page 1 of 2

REPORT OF ANALYSIS

SAMPLE ID: OUTFALL 001 FINAL EFFLUENT

SAMPLE NO: 10-11642

	Method	JRA			· · · · · · · · · · · · · · · · · · ·		
Parameter	Number	QL	Result	Unit	Analys	Date	Time
Semi-Volatiles							
Chrysene /	625	5	< 5	ug/L	CLH	7/27/10	1950
3,3-Dichlorobenzidine	625	5	< 5	ug/L	CLH	7/27/10	1950
Bis(2-ethylhexyl) phthalate	625	5	< 5	ug/L	CLH	7/27/10	1950
Benzo[b]Fluoranthene /	625	5	< 5	ug/L	CLH	7/27/10	1950
Benzo[k]Fluoranthene	625	5	< 5	ug/L	CLH	7/27/10	1950
Benzo[a]Pyrene	625	5	< 5	ug/L	CLH	7/27/10	1950
Indeno[1,2,3-c,d]Pyrene	625	5	< 5	· ug/L	CLH	7/27/10	1950
Dibenz[a,h] Anthracene	625	5	< 5	ug/L	CLH	7/27/10	1950
2-Chlorophenol	625	5	< 5	ug/L	CLH	7/27/10	1950
Phenol	625	5	< 5	ug/L	CLH	7/27/10	1950
2,4-Dimethylphenol	625	5	< 5	ug/L	CLH	7/27/10	1950
2,4-Dichlorophenol	625	5	<.5	ug/L	CLH	7/27/10	1950
2,4,6-Trichlorophenol	625	5	< 5	ug/L	CLH	7/27/10	1950
2,4-Dinitrophenol	625	20	< 20	ug/L	CLH	7/27/10	1950
4,6 Dinitro-o-cresol	625	5 ~	< 5	ug/L	CLH	7/27/10	1950
Pentachlorophenol	625	10	< 10	ug/L	CLH	7/27/10	1950

NOTES:

JRA Quantification Level is the concentration of the lowest calibration standard above zero with a reliable signal.

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RESPECTFULLY SUBMITTED

Elaine Claiborne

Laboratory Director

Date: 29-Jul-10



Certificate of Analysis

Final Report

Laboratory Order ID 10070230

Client Name:

Pace Anayltical Eden

370 West Meadow Road

Eden, N.C. 27288

Date Received:

July 15, 2010

Date Issued:

July 30, 2010

Submitted To: Tammie Easter

Project Number:

9273354

Client Site I.D.:

Purchase Order

ED10554

Sample Summary List *

Laboratory Sample ID

Sample ID

Sample Date

Receive Date

10070230-001

Oufall 001 Final Effluent

07/13/2010

07/15/2010

Ted Sovars

Laboratory Manager

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solld materials are calculated on a dry weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

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Certificate of Analysis

Final Report

Laboratory Order ID 10070230

Client Name:

Pace Anayltical Eden

370 West Meadow Road

Eden, N.C. 27288

Date Received:

July 15, 2010

Date Issued:

July 30, 2010

Submitted To: Tammie Easter

Project Number:

9273354

Client Site I.D.:

Purchase Order

ED10554

-Analytical Results

Sample I.D.: Oufall 001 Final Effluent Date/Time Sampled: 07/13/10 09:20

Laboratory Sample I.D.: 10070230-001

Analysis

Date/Time Sampled. 07/10			0 1 5 11 1	Analysis Date/Time	Analyst
Parameter	Method	Sample Results	Qual Rep Limi		SKS
Mirex 🗸	SW8081A	< 0.1 ug/L	0.1	07/27/10 18:56	
PCB as Aroclor 1016	EPA608	< 1 ug/L	1	07/27/10 18:56	SKS
PCB as Aroclor 1221	EPA608	< 1 ug/L	1	07/27/10 18:56	SKS
PCB as Aroclor 1232	EPA608	< 1 ug/L	1	07/27/10 18:56	SKS
PCB as Aroclor 1242	EPA608	< 1 ug/L	1	07/27/10 18:56	SKS
PCB as Aroclor 1248	EPA608	< 1 ug/L	1	07/27/10 18:56	SKS
PCB as Aroclor 1254	EPA608	< 1 ug/L	1	07/27/10 18:56	SKS
PCB as Aroclor 1260	EPA608	< 1 ug/L	1	07/27/10 18:56	SKS
4,4-DDD 🗸	EPA608	< 0.1 ug/L	0.1	07/27/10 18:56	SKS
4,4-DDE 🗸	EPA608	< 0.04 ug/L	0.04	07/27/10 18:56	SKS
4,4-DDT 🗸	EPA608	< 0.01 ug/L	0.01	07/27/10 18:56	SKS
Aldrin √	EPA608	< 0.005 ug/L	0.005	07/27/10 18:56	SKS
alpha-BHC ✓	EPA608	< 0.02 ug/L	0.02	07/27/10 18:56	SKS
beta-BHC 🗸	EPA608	< 0.05 ug/L	0.05	- 07/27/10 -18:56	SKS
Chlordane	EPA608	< 0.2 ug/L	0.2	07/27/10 18:56	SKS
delta-BHC	EPA608	< 0.05 ug/L	0.05	07/27/10 18:56	SKS
Dieldrin 🗸	EPA608	< 0.005 ug/L	0.005	07/27/10 18:56	SKS
	EPA608	< 0.1 ug/L	0.1	07/27/10 18:56	SKS
ا Endosulfan II کا	EPA608	< 0.04 ug/L	0.04	07/27/10 18:56	SKS
Endosulfan sulfate √	EPA608	< 0.01 ug/L	0.01	07/27/10 18:56	SKS
Endrin 🗸	EPA608	< 0.1 ug/L	0.1	07/27/10 18:56	SKS
Endrin aldehyde 🗸	EPA608	< 0.2 ug/L	0.2	07/27/10 18:56	SKS
gamma-BHC (Lindane)	EPA608	< 0.02 ug/L	0.02	07/27/10 18:56	SKS
Heptachlor /	EPA608	< 0.05 ug/L	0.05	07/27/10 18:56	SKS
Heptachlor epoxide	EPA608	< 0.2 ug/L	0.2	07/27/10 18:56	SKS
Methoxychlor 🎺	EPA608	< 2 ug/L	2	07/27/10 18:56	SKS
- · · · · · · · · · · · · · · · · · · ·					



073020101249



Certificate of Analysis

Final Report

Laboratory Order ID 10070230

Client Name:

Pace Anayltical Eden

370 West Meadow Road

Eden, N.C. 27288

Date Received:

July 15, 2010

Date Issued:

July 30, 2010

Submitted To: Tammie Easter

Project Number:

9273354

Client Site I.D.:

Purchase Order

ED10554

- Analytical Results

Sample I.D.: Oufall 001 Final Effluent

Date/Time Sampled: 07/13/10 09:20

Parameter

Method

Sample Results

Qual Rep Limi

Analysis Date/Time

Laboratory Sample I.D.: 10070230-001

Analyst

Toxaphene ..

EPA608

< 3 ug/L

07/27/10 18:56

SKS





Certificate of Analysis

Final Report

Laboratory Order ID 10070230

Client Name:

Client Site I.D.:

Pace Anayltical Eden

370 West Meadow Road

Eden, N.C. 27288

Date Received:

July 15, 2010

Date Issued:

July 30, 2010

Submitted To: Tammie Easter

Project Number:

9273354

Purchase Order

ED10554

Summary of Analytical QC Batches

QC Batch ID	Method	Sample List
QC100728023	EPA608	10070230-001
QC100729022	SW8081A	10070230-001
	EPA608	
<u>QC 1</u>	<u>Parameter</u>	Qualifier Comments
CCV	4,4-DDT	s
CCV	Methoxychlor	s
LCSD	4,4-DDD	P
LCSD	4,4-DDE	P
LCSD	4,4-DDT	P
LCSD	Aldrin	P .
LCSD	delta-BHC	P
LCSD	Endosulfan I	P
LCSD	Endosulfan II	P
LCSD	Endosulfan sulfate	P
LCSD	Endrin aldehyde	P
LCSD	gamma-BHC (Lindane)	P
LCSD	Heptachlor	P
LCSD	Methoxychlor	P
MSD	4,4-DDD	P
MSD	4,4-DDE	Р
MSD	4,4-DDT	P
MSD	Endrin aldehyde	P
MSD	Methoxychlor	P

Qualifier Definations =

ualifier	Description	
ualifier	Description	

P Duplicate analysis does not meet the acceptance criteria for precision

S Surrogate recovery is outside of established acceptance limits





Data Analysis Technologies, Inc.

7715 Corporate Blvd. Plain City, OH 43064 800-733-8644

Sample Analysis Certificate

Client:

Pace Analytical

Address:

370 West Meadow Rd.

Eden, NC

Date:

7/20/2010

Project ID: Sample Date(s): 0710019

Date Received:

7/13/2010 7/15/2010

Extraction Date: Analysis Date: 7/15/2010 7/16/2010

Date: 7/20/10

Analyst:

7/16/2

Attn:

Tammie Easter

Your Project:

9273354 Outfall 001 Final Effluent

Sampled by:

Not Provided

Method:

NBSIR-85-3295

Analysis:

Tributyltin

Results:

Results can be found on the attached Data Summary Table.

QC: LS/LSD and MS- See attached summary.

Analysis Date & Time:

9273354001, Analyzed on 7/16/10@ 1:34:39 PM

Reviewed and approved for release by:

R.K. Mitchum, Ph. D

President, DAT

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Data Analysis Technologies, Inc. 7715 Corporate Boulevard Plain City, OH 43064

Data Summary

NBSIR 85-3295 / Tributyltin

Client:	Pace Analytical
Client Project:	9273354
DAT Project:	0710019
Date Sampled:	7/13/2010
Date Received:	7/15/2010
Date Prepped:	7/15/2010
Date Analyzed:	7/16/2010
Analyst:	KD

Client Sample ID:	DAT Sample ID:	Analyte:	Sample MDL, ug/L	TBT, ug/L	Q
9273354001	0710019- 1	Tributyltin	0.04	ND	
Outfall 001 Final Effluent					

TBT=Tributyltin

ND=Not detected above the detection limit.

B = Method blank contained a trace level of the compound of interest.

D = Value measured from a dilution.

J = Value less than the low standard.

ta Analysis Technologies, Inc. 7715 Corporate Boulevard Plain City, OH 43064

QC Summary BSIR 85-3295 / Tributyltin

Pace Analytical

Client Project: DAT Project:

9273354

0710019

Date Prepped:

7/15/2010

Date Analyzed:

7/16/2010

Analyst:

KD

Client Sample ID:	DAT Sample ID:	Analyte:	Instr. Cone, ug/mL	Sample MDL, ug/L	% Rec	% RSD	Q
Method Blank	MB	Tributyltin	ND	0.03			
Matrix Spike	0710019-1	Tributyltin	6.63	0.04	66		
Laboratory Spike	LS	Tributyltin	9.90	0.03	99		
Laboratory Spike Duplicate	LSD	Tributyltin	11.57	0.03	116	16	

$$\begin{split} TBT &= Tributyltin\\ ND &= Not \ detected \ at \ the \ detection \ limit \ shown.\\ D &= Value \ measured \ from \ a \ dilution. \end{split}$$

J = Value less than the low standard.



Data Analysis Technologies, Inc. 7715 Corporate Blvd. Plain City, OH 43064 800-733-8644

Sample Analysis Certificate

Client: Address: Pace Analytical

370 West Meadow Rd.

Eden, NC

Date:

7/20/2010 0710019

Project ID: Sample Date(s): Date Received:

7/13/2010 7/15/2010

Extraction Date: Analysis Date:

7/15/2010 7/16/2010

Analyst:

KD

Date: 7/20/10

Tammie Easter

Your Project:

9273354 Outfall 001 Final Effluent

Not Provided Sampled by:

NBSIR-85-3295

Method: Analysis:

Tributyltin

Results:

Results can be found on the attached Data Summary Table.

QC: LS/LSD and MS- See attached summary.

Analysis Date & Time:

9273354001, Analyzed on 7/16/10@ 1:34:39 PM

Reviewed and approved for release by:

R.K. Mitchum, Ph. D

President, DAT

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Data Analysis Technologies, Inc. 7715 Corporate Boulevard Plain City, OH 43064

Data Summary

NBSIR 85-3295 / Tributyltin

Client:	Pace Analytical
Client Project:	9273354
DAT Project:	0710019
Date Sampled:	7/13/2010
Date Received:	7/15/2010
Date Prepped:	7/15/2010
Date Analyzed:	7/16/2010
Analyst:	KD

Client Sample ID:	DAT Sample ID:	Analyte:	Sample MDL, ug/L	TBT, ug/L	Q
9273354001	0710019- 1	Tributyltin	0.04	ND	
Outfall 001 Final Effluent					

TBT=Tributyltin

ND=Not detected above the detection limit.

B = Method blank contained a trace level of the compound of interest.

D = Value measured from a dilution.

J = Value less than the low standard.

ta Analysis Technologies, Inc. 7715 Corporate Boulevard Plain City, OH 43064

QC Summary BSIR 85-3295 / Tributyltin

Client:

Pace Analytical 9273354

Client Project:

DAT Project:

0710019

Date Prepped:

7/15/2010

Date Analyzed:

7/16/2010

Analyst:

KD

Client Sample 1D:	DAT Sample ID:	Analyte:	Instr. Conc, ug/mL	Sample MDL, ug/L	% Rec	% RSD	Q
Method Blank	MB	Tributyltin	ND	0.03			
Matrix Spike	0710019-1	Tributyltin	6,63	0.04	66		
Laboratory Spike	LS	Tributyltin	9.90	0.03	99		
Laboratory Spike Duplicate	LSD	Tributyltin	11.57	0.03	116	16	

TBT = Tributyltin
ND = Not detected at the detection limit shown.

D = Value measured from a dilution. J = Value less than the low standard.

DOCUMENTATION

Passe 4 of 8

205 East Meadow Road - Suite A Eden, NC 27288 (336)623-8921

SAMPLE ANALYTE COUNT

Project:

Water Quality Criteria

Pace Project No.: 9273354

Lab ID	Sample ID	Method	Analyata	Analytes Reported	Laboratory
9273354001	Outfail 001 Final Effluent	EPA 200.7	WWL	2	PASI-A
		SM 2340B	WML	1	PASI-A
		EPA 200.8	RUS	11	PASI-M
		EPA 245.1	TEM	1	PASI-M
		EPA 6270	9 PJ	7	PASI-C
		SM 4500-CI-E	JDA	4	PASI-A
9273354002	Outfall 001 Final Effluent	SM 3500-Cr D	KPP	1	PASI-E
		EPA 624	MCK	32	PASI-C

205 East Meadow Road - Suite A Eden, NC 27288 (336)623-8021

ANALYTICAL RESULTS

Project:

Water Quality Criteria

Pace Project No.: 9273354

Sample: Outfall 001 Final Effluent	Lab ID: 927	3354001	Collected: 07/13/	10 09:2	20 Received: 0	7/14/10 09:20	Vatrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Que
200.7 MET ICP	Analytical Meti	nod: EPA 2	00.7 Preparation M	ethod:	EPA 200.7			
Calcium	31500 ug	/L	100	1	07/26/10 12:58	5 07/27/10 17:47	7440-70-2	
Magnesium	5 380 uģ	/L	100	1	07/26/10 12:55	5 07/27/10 17:47	7439-95-4	
2340B Hardness, Total (Calc.)	Analytical Meti	10d: SM 23	40B					
Total Hardness	101 mg	/L	0.65	1		07/27/10 17:47	•	
200.8 MET ICPMS, Dissolved	Analytical Meth	10d: EPA 21	00.8					
Antimony, Dissolved	0.60 ug	L	0.50	1	07/21/10 14:49	07/26/10 16:56	7440-36-0	
Arsenic, Dissolved	0.69 ug	L	0.50	1	07/21/10 14:43	07/28/10 16:56	7440-38-2	
Cadmium, Dissolved	0.33 цд	L	0.080	4	07/21/10 14:43	07/26/10 16:56	7440-43-9	
Chromium, Dissolved	0.50 ug/	L	0.50	1	07/21/10 14:43	07/26/10 15:56	7440-47-3	
Copper, Dissolved	5.6 ug/	L	0.50	1	07/21/10 14:48	07/26/10 16:56	7440-50-8	
Lead, Dissolved	0.50 ug/	L	0.10	1	07/21/10 14:43	07/26/10 16:56	7439-92-1	
Nickel, Dissolved	2.3 ug/		0.50	1	,	07/26/10 16:56		
Selenium, Dissolved	ND ug/		0.50	4		07/26/10 16:56		
Bilver, Dissolved	ND ug/		0.50	4		07/26/10 16:56		
Thallium, Dissolved	ND ug/		0.10	1		07/26/10 16:56		
inc, Dissolved	47.0 ug/		5.0	4 .		07/26/10 16:56		
45.1 Maroury, Dissolved	Analytical Meth	od: EPA 24	15.1					
Mercury, Dissolved 🗸	ND ug/	L	0.20	7	07/20/10 18:26	07/21/10 14:55	7439-97-6	
1270 MSSV Semivolatile Organic	Analytical Meth	od: EPA 82	270 Preparation Me	lhod: E	PA 3510			
Kepone V	ND ug/	ļ	50.0	1	07/16/10 08:30	07/22/10 15:04	143-50-0	
litrobenzene-d5 (S)	30 %		21-110	1		07/22/10 15:04		
-Fluorobiphenyl (S)	34 %		27-110	1		07/22/10 15:04		
erphenyl-d14 (S)	57 %		31-107	1		07/22/10 15:04		
henol-d6 (S)	11 %		10-110	1		07/22/10 15:04		
-Fluorophenal (S)	19 %		12-110	1		07/22/10 15:04		
,4,6-Tribromophenol (S)	56 %		27-110	1		07/22/10 15:04		
500 Chloride	Analytical Meth	adi CRA AEC						
	-					07/07/40 40.20	**********	
Chloride	67.9 mg/	ŗ.	10.0	2		07/27/10 13:57	15887-00-6	
ample: Outfall 001 Final Effluent	Lab ID: 9273	354002	Collected: 07/13/1	0 13:18	Received: 07	/14/10 09:20 M	atrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
hromium, Hexavalent	Analytical Metho	nd: SM 350	0-Cr D	***************************************	to activities in a superior control of the control	THE PERSON NAMED IN THE PE	***************************************	A DESTRUCTION IN
hromium, Hexavalent	ND mg/		0.050	1		07/14/10 12:55	18540-29-9	
24 Volatile Organics	Analytical Metho			•				
				a		07400H0	4 mm 6 ft -	
cralein	ND ug/L		100	1		07/26/10 12:57		
crylanitrile	ND ug/L		100	1		07/26/10 12:57		
enzene	ND ug/L		5.0	1		07/26/10 12:57	71-48-2	
te: 09/03/2010 10:05 AM	REP	ORT OF	LABORATORY	ANA	LYSIS		Pe	ige 4 of
		-						-

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205 East Meadow Road - Suite A Eden, NC 27288 (336)623-8921

ANALYTICAL RESULTS

Project:

Water Quality Criteria

Pace Project No.: 9273354

Sample: Outfall 001 Final Effluent	Lab ID: 9273354002	Collected: 07/13/10 13:1	5 Received: 07/14/10 09:20 Matrix: Water	
Parameters	Results Units	Report Limit DF	Prepared Analyzed CAS No. C	Jusi
524 Volatile Organics	Analytical Method: EPA	324		
Bromochloromethane	ND ug/L	5.0 1	07/26/10 12:57 74-97-5	
Bromodichioromethane	ND ug/L	5.0 1	07/26/10 12:57 75-27-4	
Bromoform	ND ug/L	5.0 1	07/26/10 12:57 75-25-2	
Bromomethane	ND ug/L	10.0 1	07/26/10 12:57 74-83-9	
Carbon tetrachloride	ND ug/L	5.0 1	07/26/10 12:57 56-23-5	
Chlorobenzene	ND ug/L	5.0 1	07/26/10 12:57 108-90-7	
Chioroform	ND ug/L	5.0 1	07/26/10 12:57 67-66-3	
Dibromochloromethane	ND ug/L	5.0 1	07/26/10 12:57 124-48-1	
1,2-Dichlorobenzene	ND ug/L	5.0 1	07/26/10 12:57 95-50-1	
1,3-Dichlorobenzene	ND ug/L	5.0 1	07/26/10 12:57 541-73-1	
1,4-Dichlorobenzena	ND ug/L	5.0 1	07/26/10 12:57 108-48-7	
1,2-Dichloroethane	ND ug/Ĺ	5.0 1	07/26/10 12:57 107-06-2	
1,1-Dichloroethene	ND ug/L	5.0 1	07/26/10 12:57 75-35-4	
trans-1,2-Dichloroethene	ND ug/L	5.0 1	07/26/10 12:57 156-60-5	
1,2-Diohtoropropane	ND ug/L	5.0 1	07/26/10 12:57 78-87-5	
cis-1,3-Dichloropropene	ND ug/L	5.0 1	07/26/10 12:57 10061-01-5	
rane-1,3-Dichloropropene	ND ug/L	5.0 1	07/26/10 12:57 10061-02-6	
Elhylbenzene	ND ug/L	5.0 1	07/26/10 12:57 100-41-4	
Methylene Chloride	ND ug/L	5.0 1	07/26/10 12:57 75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L	5.0 1	07/26/10 12:57 79-34-5	
Tetrachioroethene	ND ug/L	5.0 1	07/26/10 12:57 127-18-4	
Toluenė	ND ug/L	5.0 1	07/26/10 12:57 106-88-3	
1,1,2-Trichloroethane	ND ug/L	5.0 1	07/28/10 12:57 79-00-5	
Frichlorcethene	ND ug/L	5.0 1	07/26/10 12:57 79-01-6	
/inyl chloride	ND ug/L	5.0 1	07/26/10 12:57 75-01-4	
Dibromofluoromethane (S)	108 %	88-113 1	07/26/10 12:57 .1868-53-7	
I-Bromofluorobenzene (S)	94 %	86-111 1	07/26/10 12:57 460-00-4	
Foluene-d8 (S)	101 %	82-105 1	07/26/10 12:57 2037-26-5	
,2-Dichloroethane-d4 (S)	112 %	70-130 1	07/26/10 12:57 17060-07-0	

			Form Approved 1/14/99 OMB Number 2040-0086
SUPPLEMENTAL APPLI	CATION INFORMATION	N .	
PART E. TOXICITY TESTING	DATA		
two species), or the results f results show no appreciable not include information on c analysis conducted using 40 and other appropriate QA/Q In addition, submit the result test conducted during the pa of a toxicity reduction evalua If you have already submitte requested in question E.4 for methods. If test summaries If no biomonitoring data is required, do a	Is with a design flow rate greater the CFR Part 403); or 3) POTWs requirements include quarterly testing for a rom four tests performed at least an toxicity, and testing for acute and/ormbined sewer overflows in this sec CFR Part 136 methods. In addition crequirements for standard methods of any other whole effluent toxicity st four and one-half years revealed tion, if one was conducted. d any of the information requested in previously submitted information.	an or equal to 1.0 mgd; 2) POTWs wed by the permitting authority to subrall-remonth period within the past 1 years are chronic toxicity, depending on the retion. All information reported must be a thing that a must comply with QA/QC as for analytes not addressed by 40 Cortests from the past four and one-hall toxicity, provide any information on the part E, you need not submit it again if EPA methods were not used, reported.	nith a pretreatment program (or those nit data for these parameters. ar using multiple species (minimum of prior to the application, provided the ange of receiving water dilution. Do e based on data collected through requirements of 40 CFR Part 136 CFR Part 136. If years. If a whole effluent toxicity the cause of the toxicity or any results on. Rather, provide the information the reasons for using alternate by be submitted in place of Part F.
E.1. Required Tests.			
✓ chronicacut E.2. Individual Test Data. Complete the	ne following chart for each whole eff		reported.
a. Test information.	rest number	lest number: U	Test number:4
Test species & test method number	T	T	
Age at initiation of test			
Outfall number	001	001	001
Dates sample collected			
Date test started			
Duration			
b. Give toxicity test methods follow	red.		
Manual title	U.S. EPA. 2002 Short Term	Methods for Estimating the	Chronic Toxicity of Effluents
Edition number and year of publication	and Receiving Waters to	Freshwater Organisms.	
Page number(s)		***************************************	
c. Give the sample collection meth	od(s) used. For multiple grab samp	les, indicate the number of grab sam	ples used.
24-Hour composite	х	x	х
Grab			
d. Indicate where the sample was t	aken in relation to disinfection. (Che	eck all that apply for each)	
Before disinfection			
After disinfection	x	X	X

After dechlorination

FACILITY NAME AND PERMIT NUMBE	ER:		Form Approved 1/14/99
Emporia WWTP VA0020346			OMB Number 2040-0086
	Test number: 2	Test number: 3	Test number: 4
e. Describe the point in the treatme	ent process at which the sample was	collected.	
Sample was collected:	Final Post Aeration	Final Post Aeration	Final Post Aeration
f. For each test, include whether th	ne test was intended to assess chron	ic toxicity, acute toxicity, or both.	
Chronic toxicity	X	×	x
Acute toxicity			
g. Provide the type of test performe	ed.		
Static			
Static-renewal			
Flow-through			
h. Source of dilution water. If labor	atory water, specify type; if receiving	water, specify source.	A CONTRACTOR OF THE PROPERTY O
Laboratory water			
Receiving water			
i. Type of dilution water. It salt water	er, specify "natural" or type of artificia	al sea salts or brine used.	-
Fresh water			
Salt water			
j. Give the percentage effluent used	for all concentrations in the test ser	ies.	The state of the s
k. Parameters measured during the	test. (State whether parameter mee	ts test method specifications)	
рН			
Salinity			
Temperature			
Ammonia			
Dissolved oxygen			
I. Test Results.			PARE C 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Acute:			
Percent survival in 100% effluent	%	%	%

%

LC₅₀

95% C.I.

Control percent survival

Other (describe)

%

%

%

%

Chronic: NOEC %	%	
	%	
		%
IC ₂₅ %	%	%
Control percent survival %	%	%
Other (describe)		
m. Quality Control/Quality Assurance.		
Is reference toxicant data available?		
Was reference toxicant test within acceptable bounds?		
What date was reference toxicant test run (MM/DD/YYYY)?		
Other (describe)		
E.3. Toxicity Reduction Evaluation. Is the treatment works involved in a To YesNo	submitted biomonitoring test informati	on, or information regarding the e permitting authority and a
Summary of results: (see instructions) See Attachment.		

END OF PART E.

REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM

2A YOU MUST COMPLETE.



1800 Kraft Drive, Suite 101 · Blacksburg, VA 24060
Tel 540-953-2821 · Fax 540-951-1481 · Toll Free 877-CLENWTR
www.biomon.com

November 12, 2008

Mr. James Page City of Emporia WWTP P.O. Box 511 Emporia, VA 23847

Dear Mr. Page:

Enclosed are the results of the toxicity tests which Biological Monitoring, Inc. (BMI) recently performed for The City of Emporia WWTP. The following table summarizes your results:

SAMPLE	TEST	RESU	RESULTS		
OZIVII IZE	IEGI	Survival	Reproduction/ Growth	Pass/Fail*	(if any)
		NOEC = 100%	NOEC = 100%		
	STC Pp	LOEC = N/A	LOEC = N/A	Pass	N/A
	эгсгр	TUc = 1.0	TUc = 1.0		
Outfall		48h LC50 > 100%	IC25 > 100%		
001		NOEC = 100%	NOEC = 8%		
001	STC Cd	LOEC = N/A	LOEC = 54%	Pass	37/4
	SIC Ca	TUc = 1.0	TUc = 12.5		N/A
		48h LC50 > 100%	IC25 > 100%		

^{*} Pass = Test results were likely in compliance with your NPDES permit requirements. To confirm, please refer to your permit.

* Fail = Test results may not be in compliance with your NPDES permit requirements. To confirm, please refer to your permit. It may be prudent and/or required to repeat a failed test within 30 days.

BMI thanks you for the opportunity to provide your group with our services.

Sincerely,

Tina Paugh

Laboratory Manager

enc: as stated

BIOLOGICAL MONITORING, INC. Toxicity Test Condition Summary

Client: City of Emporia WWTP

Prepared by: Tina Paugh

NPDES Permit #: VA0020346

Experiment ID#: EMP102808-1

Test Organism: Pimephales promelas

Test Type: Short-term Chronic

Organism Age at Start of Test: < 24 hrs

Sample Tested: Outfall 001

Sample Type: Composite

Sample Collection Dates and Times:

Sample Collector: Jim Page

Test Solution Renewal Frequency: Daily

Dilution Water Used: MHRW 102008

No. of Replicates per conc.: 4

Chamber Size: 500 mL PP

Feeding prior to test: None

Photo Period: 16h light/8h dark

Start of Test: Date: 10/28/08

End of Test: Date: 11/4/08

Equipment:

pH Meter: Hanna HI 9025 DO Meter: YSI 58 (b) SCT Meter: YSI 33 (A)

°C Measurement: Calibrated Thermometer

Salinity: SCT Meter

Chlorine: Fisher/Porter Amperometric Titrator

From 10/26/08 @ 0730 to 10/27/08 @ 0920;

From 10/28/08 @ 0910 to 10/29/08 @ 0910;

From 10/30/08 @ 0905 to 10/31/08 @ 0905.

Delivered by: UPS

Test Temperature: 25 ± 1 °C

No. of Organisms per Replicate: 10

Test Volume: 300 mL

Feeding Regime: 0.1mL Artemia, 2x Daily

Test Duration: 7d

Time: 1645

Time: 1600

Test Method Reference: U.S. EPA. 2002. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms. EPA-821-R-02-013.



1800 Kraft Drive, Suite 101 • Blacksburg, VA 24060
Tel 540-953-2821 • Fax 540-951-1481 • Toll Free 877-CLENWTR
www.biomon.com

November 9, 2009

Mr. James Page City of Emporia WWTP P.O. Box 511 Emporia, VA 23847

Dear Mr. Page:

Enclosed are the results of the toxicity tests which Biological Monitoring, Inc. (BMI) recently performed for The City of Emporia WWTP. The following table summarizes your results:

SAMPLE	TEST	RESU	Pass/Fail*	Next Step	
SAWILLE		Survival	Reproduction/ Growth	Pass/Faii"	(if any)
Outfall 001	STC Pp	NOEC = 100%	NOEC = 100%		N/A
		LOEC = N/A	LOEC = N/A	D	
		TUc = 1.0	TUc = 1.0	Pass	
		48h LC50 > 100%	IC25 > 100%		
	STC Cd	NOEC = 100%	NOEC = 8%	Pass	N/A
		LOEC = N/A	LOEC = 54%		
		TUc = 1.0	TUc = 12.5		
		48h LC50 > 100%	IC25= 26.75%		

^{*} Pass = Test results were likely in compliance with your NPDES permit requirements. To confirm, please refer to your permit.

* Fail = Test results may not be in compliance with your NPDES permit requirements. To confirm, please refer to your permit. It may be prudent and/or required to repeat a failed test within 30 days.

BMI thanks you for the opportunity to provide your group with our services.

Sincerely,

Tina Paugh

Laboratory Manager

Charature & targ

enc: as stated

BIOLOGICAL MONITORING, INC. Toxicity Test Condition Summary

Client: City of Emporia WWTP

Prepared by: Tina Paugh

NPDES Permit #: VA0020346

Experiment ID#: EMP102009-1

Test Organism: Pimephales promelas

Test Type: Short-term Chronic

Organism Age at Start of Test: < 24 hrs

Sample Tested: Outfall 001

Sample Type: Composite

Sample Collection Dates and Times:

Sample Collector: Jim Page & Melvin Prince

Test Solution Renewal Frequency: Daily

Dilution Water Used: MHRW 101909

No. of Replicates per conc.: 4

Chamber Size: 500 mL PP

Feeding prior to test: None

Photo Period: 16h light/8h dark

Start of Test: Date: 10/20/09

End of Test: Date: 10/27/09

Equipment:

pH Meter: Hanna HI 9025 DO Meter: YSI 58 (b) SCT Meter: YSI 33 (A)

°C Measurement: Calibrated Thermometer

Salinity: SCT Meter

Chlorine: Fisher/Porter Amperometric Titrator

From 10/18/09 @ 0900 to 10/19/09 @ 0903;

From 10/20/09 @ 0910 to 10/21/09 @ 0905; From 10/22/09 @ 0850 to 10/23/09 @ 0850.

Delivered by: UPS

Test Temperature: 25 ± 1 °C

No. of Organisms per Replicate: 10

Test Volume: 300 mL

Feeding Regime: 0.1mL Artemia, 2x Daily

Test Duration: 7d

Time: 1330

Time: 1430

Test Method Reference: U.S. EPA. 2002. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms. EPA-821-R-02-013.



1800 Kraft Drive, Suite 101 • Blacksburg, VA 24060
Tel 540-953-2821 • Fax 540-951-1481 • Toll Free 877-CLENWTR
www.biomon.com

November 12, 2010

Mr. James Page City of Emporia WWTP P.O. Box 511 Emporia, VA 23847

Dear Mr. Page:

Enclosed are the results of the toxicity tests which Biological Monitoring, Inc. (BMI) recently performed for The City of Emporia WWTP. The following table summarizes your results:

SAMPLE	TEST	RESU		Next Step	
		Survival	Reproduction/ Growth	Pass/Fail*	(if any)
Outfall 001	STC Pp	NOEC = 100% LOEC = N/A TUc = 1.0 48h LC50 > 100%	NOEC = 100% LOEC = N/A TUc = 1.0 IC25 = N/A	Pass	N/A
	STC Cd	NOEC = 54% LOEC = 100% TUc = 1.85 48h LC50 > 100%	NOEC = 8% LOEC = 54% TUc = 12.5 IC25= 9.50%	Pass	N/A

^{*} Pass = Test results were likely in compliance with your NPDES permit requirements. To confirm, please refer to your permit.

* Fail = Test results may not be in compliance with your NPDES permit requirements. To confirm, please refer to your permit. It may be prudent and/or required to repeat a failed test within 30 days.

BMI thanks you for the opportunity to provide your group with our services.

Sincerely,

Christina R. Paugh Laboratory Manager

enc: as stated

BIOLOGICAL MONITORING, INC. **Toxicity Test Condition Summary**

Client: City of Emporia

Prepared by: Christina R. Paugh

NPDES Permit #: VA0020346

Experiment ID#: EMP102610-1

Test Organism: Pimephales promelas

Test Type: Short-term Chronic

Organism Age at Start of Test: 24-48 hr

Sample Tested: Outfall 001

Sample Type: 24 Hour Composite

Sample Collection Dates and Times:

From 10/26/10 @ 0900 to 10/27/10 @ 0900; From 10/28/10 @ 0910 to 10/29/10 @ 0920;

Sample Collector: Operators & Lab Tech Delivered by: UPS

Test Solution Renewal Frequency: Daily

Dilution Water Used: MHRW 102510

Test Temperature: 25 ± 1 °C

No. of Replicates per conc.: 4

Feeding prior to test: None

Chamber Size: 500 mL PP

Photo Period: 16h light/8h dark

Start of Test: Date: 10/26/10

End of Test: Date: 11/02/10

Equipment:

pH Meter: Hanna 9025 DO Meter: YSI 58 A SCT Meter: Hanna 991300

°C Measurement: Calibrated Thermometer

From 10/24/10 @ 0706 to 10/25/10 @ 0700;

No. of Organisms per Replicate: 10

Feeding Regime: 0.1 mL live rinsed

artemia, 2x daily

Test Volume: 300 mL

Test Duration: 7 d

Time: 1525

Time: 1520

Test Method Reference: U.S. EPA. 2002. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms. EPA-821-R-02-013.

FACILITY NAME AND PERMIT N Emporia WWTP VA0020346	UMBER:		Form Approved 1/14/99 OMB Number 2040-0086		
SUPPLEMENTAL API	PLICATION INFORMAT	ION			
PART E. TOXICITY TEST	NG DATA				
At a minimum, these re two species), or the res results show no apprecent not include information analysis conducted using and other appropriate Conducted during the test conducted during the following the follo	ults from four tests performed at lea- iable toxicity, and testing for acute a on combined sewer overflows in this ng 40 CFR Part 136 methods. In ad- A/QC requirements for standard me- results of any other whole effluent to: ne past four and one-half years reve- valuation, if one was conducted. mitted any of the information reques i. 4 for previously submitted information aries are available that contain all of	or a 12-month period within the pass annually in the four and one-half nd/or chronic toxicity, depending on a section. All information reported n dition, this data must comply with Q withods for analytes not addressed b xicity tests from the past four and or aled toxicity, provide any informatio ted in Part E, you need not submit ion. If EPA methods were not used the information requested below, the	at 1 year using multiple species (minimum of years prior to the application, provided the the range of receiving water dilution. Do nust be based on data collected through NA/QC requirements of 40 CFR Part 136		
✓ chronic	_		the last four and one-half years. Allow one		
	species constitutes a test). Copy thi	s page if more than three tests are	being reported.		
	Test number:5	Test number:	Test number:		
a. Test information.					
Test species & test method number	r				
Age at initiation of test					
Outfall number	001				
Dates sample collected					

b. Give toxicity test methods followed.

Date test started

Duration

Manual title

After disinfection

After dechlorination

Edition number and year of publication Page number(s) c. Give the sample collection method(s) used. For multiple grab samples, indicate the number of grab samples used. Х 24-Hour composite Grab d. Indicate where the sample was taken in relation to disinfection. (Check all that apply for each) Before disinfection

Methods for Estimating the

Freshwater Organisms.

U.S. EPA. 2002 Short Term

and Receiving Waters to

X

Chronic Toxicity of Effluents

LACITII I MAME AND LEKMII MOMBE	ER:	1		Form Approved 1/14/99
Emporia WWTP VA0020346				OMB Number 2040-0086
	Test number: 5		Test number:	Test number:
e. Describe the point in the treatme	ent process at which the sample was	collec	ted.	
Sample was collected:	Final Post Aeration	Fina	al Post Aeration	Final Post Aeration
f. For each test, include whether th	e test was intended to assess chroni	ic toxic	city, acute toxicity, or both.	
Chronic toxicity	x			
Acute toxicity				
g. Provide the type of test performe	ed.			described with the second of t
Static				
Static-renewal				
Flow-through				
h. Source of dilution water. If labor	ratory water, specify type; if receiving	water	, specify source.	
Laboratory water				
Receiving water				
i. Type of dilution water. It salt wat	er, specify "natural" or type of artificia	ıl sea :	salts or brine used.	
Fresh water				
Salt water				
j. Give the percentage effluent used	d for all concentrations in the test seri	ies.		
			The state of the s	
k. Parameters measured during the	test. (State whether parameter mee	ts test	method specifications)	
рН				
Salinity				
Temperature				
Ammonia				
Dissolved oxygen				
I. Test Results.				
Acute:				
Percent survival in 100% effluent	%		%	%
LC ₅₀				
95% C.I.	%	***	%	%
Control percent cunical	ا رہ		^1	

Other (describe)

FACILITY NAME AND PERMIT NUMBE Emporia WWTP VA0020346	R:		Form Approved 1/14/99 OMB Number 2040-0086
Chronic:			
NOEC	%	%	%
IC ₂₅	%	%	%
Control percent survival	%	%	%
Other (describe)			
m. Quality Control/Quality Assurar	nce.		
Is reference toxicant data available?			
Was reference toxicant test within acceptable bounds?			
What date was reference toxicant test run (MM/DD/YYYY)?			
Other (describe)			
E.4. Summary of Submitted Biomonito cause of toxicity, within the past fou summary of the results.	ring Test Information. If you have r and one-half years, provide the date		ion, or information regarding the permitting authority and a
Date submitted: Summary of results: (see instruction See Attachment.	(MM/DD/YYYY)		

END OF PART E.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM
2A YOU MUST COMPLETE.

Toxicity Testing Data Summary

Samples Tested

Sample	Sample Type	Date/Time
NPDES Permit #: VA0020346	Composite	10/23/11 @ 1230 to 10/24/11 @ 1215
NPDES Permit #: VA0020346	Composite	10/25/11 @ 0900 to 10/26/11 @ 0900
NPDES Permit #: VA0020346	Composite	10/27/11 @ 0830 to 10/28/11 @ 0900

Result Summary

Results	Next Step
NOEC = 100%	Pass
NOEC = 50%	Pass
	NOEC = 100%

BIOLOGICAL MONITORING, INC. **Toxicity Test Condition Summary**

Client: The City of Emporia

Prepared by: Jordan Margason

NPDES Permit #: VA0020346

Experiment ID#: EMP102511-1

Test Organism: Pimephales promelas

Test Type: Short Term Chronic

Organism Age at Start of Test: <48h

Sample Tested: Outfall 001

Sample Type: Composite

Sample Collection Dates and Times:

Sample Collector: J.C. Page Jr.

Test Solution Renewal Frequency: Daily

Dilution Water Used: MHRW 102011 & MHRW 102811

Test Temperature: 25 ± 1 °C

No. of Replicates per conc.: 4

Feeding prior to test: None

Chamber Size: 400 mL

Photo Period: 16h light/8h dark

Start of Test: Date:

10/25/11

End of Test: Date:

Equipment:

11/1/11

pH Meter: Hanna 991300 - 674361

DO Meter: YSI 58 - 5052

SCT Meter: Hanna 991300 - 674361

°C Measurement: Calibrated Thermometer – 61161-274 102003403

From 10/23/11 @ 1230 to 10/24/11 @ 1215; From 10/25/11 @ 0900 to 10/26/11 @ 0900; From 10/27/11 @ 0830 to 10/28/11 @ 0900:

Delivered by: UPS

No. of Organisms per Replicate: 10

Feeding Regime: 0.1 mL live rinsed

artemia, 2x daily

Test Volume: 350 mL

Test Duration: 7 days

Time: 1200

Time: 1149

Test Method Reference: U.S. EPA. 2002. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms. EPA-821-R-02-013 The statistical package used for evaluation of results was ToxCalc v5.0.32. The test results reported herein meet all requirements of NELAC.

Form Approved 1/14/99 OMB Number 2040-0086 FACILITY NAME AND PERMIT NUMBER:

Emporia WWTP VA0020346

SU	PPLEMENTAL	APPLICATION INFORMATION			
PAI	RT F. INDUSTRI	IAL USER DISCHARGES AND RCRA/CERCLA WASTES			
	reatment works receivi plete Part F.	ring discharges from significant industrial users or which receive RCRA, CERCLA, or other remedial wastes must			
GE	NERAL INFORMAT	TION:			
F.1.	Pretreatment ProgramYesNo	m. Does the treatment works have, or is it subject to, an approved pretreatment program?			
F.2.	Number of Significar of industrial users that	nt Industrial Users (SIUs) and Categorical Industrial Users (CIUs). Provide the number of each of the following types discharge to the treatment works.			
	a. Number of non-cat	tegorical SIUs. 1			
	b. Number of CIUs.	1			
SIG	NIFICANT INDUST	TRIAL USER INFORMATION:			
		mation for each SIU. If more than one SIU discharges to the treatment works, copy questions F.3 through F.8 in requested for each SIU.			
F.3.	Significant Industrial pages as necessary.	User Information. Provide the name and address of each SIU discharging to the treatment works. Submit additional			
	Name:	Georgia Pacific			
	Mailing Address:	620 Davis Street Emporia, Va 23847			
F.4.		. Describe all of the industrial processes that affect or contribute to the SIU's discharge.			
	1 ly 11 dod production	. Traint boiler Gystem			
F.5.	Principal Product(s) a discharge.	Principal Product(s) and Raw Material(s). Describe all of the principal processes and raw materials that affect or contribute to the SIU's discharge.			
	Principal product(s):	Plywood			
	Raw material(s):	None			
F.6.	Flow Rate.				
		er flow rate. Indicate the average daily volume of process wastewater discharged into the collection system in gallons whether the discharge is continuous or intermittent.			
	<u>0</u> gr	pd (continuous orintermittent)			
	b. Non-process waste system in gallons p	ewater flow rate. Indicate the average daily volume of non-process wastewater flow discharged into the collection per day (gpd) and whether the discharge is continuous or intermittent.			
		pd (continuous orintermittent)			
F.7.	Pretreatment Standard	ds. Indicate whether the SIU is subject to the following:			
	a. Local limits	<u></u> ✓ YesNo			
	b. Categorical pretreat	tment standardsNo			
		pretreatment standards, which category and subcategory?			
	Plywood production.	. Plant Boiler System			

1	LITY NAME AND PERMIT NUMBER:	Form Approved 1/14/99 OMB Number 2040-0086
Empo	oria WWTP VA0020346	
F.8.	Problems at the Treatment Works Attributed to Waste Discharged by thupsets, interference) at the treatment works in the past three years?	e SIU. Has the SIU caused or contributed to any problems (e.g.,
	✓ YesNo If yes, describe each episode.	
	Georgia Pacific. Solids discharge to sewer put us in violation of TSS	S & F-COLLL imits for Oct 2011 also Sept 2011.
RCR	A HAZARDOUS WASTE RECEIVED BY TRUCK, RAIL, OR DEDIC	CATED PIPELINE:
F.9.	RCRA Waste. Does the treatment works receive or has it in the past three y pipe?YesNo (go to F.12.)	ears received RCRA hazardous waste by truck, rail, or dedicated
F.10.	Waste Transport. Method by which RCRA waste is received (check all tha	tapply):
	TruckRailDedicated Pipe	
E 11	Waste Description. Give EPA hazardous waste number and amount (volume	ma or mana anasik unita)
* . 1 * .	EPA Hazardous Waste Number Amount	Units
	N/A	
	CLA (SUPERFUND) WASTEWATER, RCRA REMEDIATION/CORI ON WASTEWATER, AND OTHER REMEDIAL ACTIVITY WASTE	
	Remediation Waste. Does the treatment works currently (or has it been no	
	Yes (complete F.13 through F.15.)	and that it will) receive waste nonremedial activities :
	Provide a list of sites and the requested information (F.13 - F.15.) for each control of the sites and the requested information (F.13 - F.15.)	urrent and future site
	, , , , , , , , , , , , , , , , , , , ,	
F.13.	Waste Origin. Describe the site and type of facility at which the CERCLA/R in the next five years).	CRA/or other remedial waste originates (or is expected to original
	in the next the years).	
F.14.	Pollutants. List the hazardous constituents that are received (or are expect known. (Attach additional sheets if necessary).	ed to be received). Include data on volume and concentration, if
	(aller deletal filosocally).	
F.15.	Waste Treatment.	
	 Is this waste treated (or will it be treated) prior to entering the treatment waste 	vorks?
	YesNo	
	If yes, describe the treatment (provide information about the removal effic	siency):
	b. Is the discharge (or will the discharge be) continuous or intermittent?	
		scribe discharge schedule.
	intermittent, de	and the state of t
	END OF PART	강경하다리를 하는 것이 하는 그리고 하는 것이 되었다. 그는 것이 하는 것이 없는 것이 없는 것이 없는 것이 없었다.
REF	ER TO THE APPLICATION OVERVIEW TO DETE	RMINE WHICH OTHER PARTS OF FORM

2A YOU MUST COMPLETE

VPDES Permit Application Addendum

7000	Entity to whom the permit is to be issued: City of Emporia WWTP Who will be legally responsible for the wastewater treatment facilities and compliance with the permit? This may or may not be the facility or property owner.
2.	Is this facility located within city or town boundaries? (Ÿ) N
3.	Provide the tax map parcel number for the land where the discharge is located.
	204A-1A -A2
4.	For the facility to be covered by this permit, how many acres will be disturbed during the next five years due to new construction activities?NONE
5.	What is the design average effluent flow of this facility?1.5MGD For industrial facilities, provide the max. 30-day average production level, include units:
	In addition to the design flow or production level, should the permit be written with limits for any other discharge flow tiers or production levels? Y/N If "Yes", please identify the other flow tiers (in MGD) or production levels:
	Please consider the following questions for both the flow tiers and the production levels (if applicable): Do you plan to expand operations during the next five years? Is your facility's design flow considerably greater than your current flow?
6.	Nature of operations generating wastewater:
	Businesses, Restaurants, Hotels & Residential
	90 % of flow from domestic connections/sources Number of private residences to be served by the treatment works:
	10 % of flow from non-domestic connections/sources
7.	Mode of discharge: X Continuous Intermittent Seasonal Describe frequency and duration of intermittent or seasonal discharges:
	Identify the characteristics of the receiving stream at the point just above the facility's discharge point: X Permanent stream, never dry Intermittent stream, usually flowing, sometimes dry Ephemeral stream, wet-weather flow, often dry Effluent-dependent stream, usually or always dry without effluent flow Lake or pond at or below the discharge point

9.	Approval Date(s):
	O & M Manual July 06, 2009
	Sludge/Solids Management Plan N/A
	Have there been any changes in your operations or procedures since the above approval dates? Y $/$ (\hat{N})

VPDES SEWAGE SLUDGE PERMIT APPLICATION FORM

SCREENING INFORMATION

This application is divided into four sections. Section A pertains to all applicants. The applicability of Sections B, C and D depends on your facility's sewage sludge use or disposal practices. The information provided on this page will help you determine which sections to fill out.

	. I have been a second to the
1.	11 DEP 10 2011
2.	Does this facility generate sewage sludge? Yes No
	Does this facility derive a material from sewage sludge? Yes No
	If you answered "Yes" to either, complete Section B (Generation Of Sewage Sludge or Preparation Of A Material Derived From Sewage Sludge).
3.	Does this facility apply sewage sludge to the land?YesNo
	Is sewage sludge from this facility applied to the land? Yes No
	If you answer "No" to all above, skip Section C.
	If you answered "Yes" to either, answer the following three questions:
	 Does the sewage sludge from this facility meet the ceiling concentrations, pollutant concentrations, Class A pathogen reduction requirements and one of the vector attraction reduction requirements 1-8, as identified in the instructions? Yes No
	b. Is sewage sludge from this facility placed in a bag or other container for sale or give-away for application to the land? Yes No
	c. Is sewage sludge from this facility sent to another facility for treatment or blending? Yes No
	If you answered "No" to all three, complete Section C (Land Application Of Bulk Sewage Sludge).
	If you answered "Yes" to a, b or c, skip Section C.
١.	Do you own or operate a surface disposal site? X Yes No
	If "Yes" complete Section D (Surface Disposal)

SECTION A. GENERAL INFORMATION

All applicants must complete this section.

Į,	F	Facility Information.					
	a.	Facility name: City of Emporia Wastewater Treatment F	acility	1			
	b.	Contact person: James L. Epps					The second secon
		Title: Superintendent of Wastewater Plant					
		Phone: (434) 634-5682				T. T	
	c.	No extension and the second se	-				
		Street or P.O. Box: P.O.BOX 511 201 South Main Street	t				
		City or Town: Emporia	S	tate:	VA	Zin	. 23847
	d.		**********				######################################
		Street or Route #: 500 Tall Oaks Drive					
		County: Greensville					
		City or Town: Emporia	S	tate:	VA	Zip	. 23847
	e.	Is this facility a Class I sludge management facility?	 _Yes	Х	No	1	
	f.	Facility design flow rate: 1.5 Total population served: 5927	-	mg	d		
	g.	Total population served: 5927					
	h.	Indicate the type of facility:					
		X Publicly owned treatment works (POTW)					
		Privately owned treatment works					
		Federally owned treatment works					
		Blending or treatment operation					
		Surface disposal site					
		Other (describe):				*****	
	Ap	plicant Information. If the applicant is different from the al	ove,	provi	ide the fo	llowing:	
	a.	Applicant name: City of Emporia					
	b.	Mailing address:					
		Street or P.O. Box: P.O.BOX 511 201 South Main Street	···				
		City or Town: Emporia	Sta	ate: _	VA	Zip:	23847
	c.	Contact person: Brian S. Thrower	·····		water and a		
		Title: City Manager					
		Phone: (434) 634-3332	_				
	d.	Is the applicant the owner or operator (or both) of this facility $\frac{x}{y}$ operator	y?				
	e.	Should correspondence regarding this permit be directed to the facility applicant	he fac	ility (or the app	olicant?	
	Per	mit Information.					
	a.	Facility's VPDES permit number (if applicable): VA0020346	3				
	b.	List on this form or an attachment, all other federal, state or leapplied for that regulate this facility's sewage sludge manager	ocal p	ermit	ts or cons	struction	approvals received or
		Permit Number: Type of Permit: VAL020346 Sludge Disposal	1				
							-
							-

2.

3.

FA	ACILITY NAME: City of Emporia, WWTP VPDES PERMIT NUMBER: VA0020346
4.	Indian Country. Does any generation, treatment, storage, application to land or disposal of sewage sludge from this facility occur in Indian Country? Yes _x No _ If "Yes", describe:
5.	 Topographic Map. Provide a topographic map or maps (or other appropriate maps if a topographic map is unavailable) that shows the following information. Maps should include the area one mile beyond all property boundaries of the facility: a. Location of all sewage sludge management facilities, including locations where sewage sludge is generated, stored, treated, or disposed. b. Location of all wells, springs, and other surface water bodies listed in public records or otherwise known to the applicant within 1/4 mile of the property boundaries.
6.	Line Drawing. Provide a line drawing and/or a narrative description that identifies all sewage sludge processes that will be employed during the term of the permit including all processes used for collecting, dewatering, storing, or treating sewage sludge, the destination(s) of all liquids and solids leaving each unit, and all methods used for pathogen reduction and vector attraction reduction.
7.	Contractor Information. Are any operational or maintenance aspects of this facility related to sewage sludge generation, treatment, use or disposal the responsibility of a contractor? Yes No If "Yes", provide the following for each contractor (attach additional pages if necessary).
	Name: Siemens Water Technologies Corp.
	Mailing address:
	Street or P.O. Box: 1901 South Prairie Avenue
	City or Town:
	Contractor's Federal, State or Local Permit Number(s) applicable to this facility's sewage sludge: None

If the contractor is responsible for the use and/or disposal of the sewage sludge, provide a description of the service to be provided to the applicant and the respective obligations of the applicant and the contractor(s).

8. Pollutant Concentrations. Using the table below or a separate attachment, provide sewage sludge monitoring data for the pollutants which limits in sewage sludge have been established in 9 VAC 25-31-10 et seq. for this facility's expected use or disposal practices. All data must be based on three or more samples taken at least one month apart and must be no more than four and one-half years old.

POLLUTANT	CONCENTRATION (mg/kg dry weight)	SAMPLE DATE	ANALYTICAL METHOD	DETECTION LEVEL FOR ANALYSIS
Arsenic				
Cadmium				
Chromium				
Copper		Not	The state of the s	COLUMN TO STATE OF THE PROPERTY OF THE PROPERT
Lead		Available		
Mercury		MENNYA MANANA MPINANA		AND STATEMENT AND AND THE COMMENT OF STATEMENT AND
Molybdenum				
Nickel				
Selenium				
Zine				

FA	CILITY NAME: City of Emporia, WWTP	VPDES PERMIT NUMBER: VA0020346
9.	Certification. Read and submit the following certification state determine who is an officer for purposes of this certification. In and are submitting:	ement with this application. Refer to the instructions to dicate which parts of the application you have completed
	Section A (General Information)	
	Section B (Generation of Sewage Sludge or Preparation	of a Material Derived from Sewage Sludge)
	Section C (Land Application of Bulk Sewage Sludge)	
	Section D (Surface Disposal)	
	"I certify under penalty of law that this document and all attaches accordance with a system designed to assure that qualified person submitted. Based on my inquiry of the person or persons who me gathering the information, the information is, to the best of my laware that there are significant penalties for submitting false information in imprisonment for knowing violations." Name and official title Brian S. Thrower, City Manager	onnel properly gather and evaluate the information nanage the system or those persons directly responsible for mowledge and belief, true, accurate and complete. I am
	Signature States	Date Signed /d ///
	Telephone number (434) 634-3332	
	Upon request of the department, you must submit any other info	rmation necessary to assess sewage sludge use or disposal

practices at your facility or identify appropriate permitting requirements.

FACILITY NAME: City of Emporia, WWTP	VPDES PERMIT NUMBER:	VA0020346
--------------------------------------	----------------------	-----------

SECTION B. GENERATION OF SEWAGE SLUDGE OR PREPARATION OF A MATERIAL DERIVED FROM SEWAGE SLUDGE

Complete this section if your facility generates sewage sludge or derives a material from sewage sludge

Amount Generated On Site. Total dry metric tons per 365-day period generated dry metric tons per 365-day period generated from Off Site. If your fadisposal, provide the following information sludge from more than one facility, attach aca. Facility name: N/A	acility receives sewage sludge from a for each facility from which sewage	mother facility for treatment, use or			
disposal, provide the following information sludge from more than one facility, attach ac	for each facility from which sewage s	nother facility for treatment, use or			
a. Facility name: N/A					
b. Contact Person:					
Title:					
Phone: ()					
c. Mailing address:					
Street or P.O. Box:					
City or Town:	State:	Zip:			
e. Total dry metric tons per 365-day period	I received from this facility:	dry metric tons			
Describe, on this form or on another she	et of paper, any treatment processes l	known to occur at the off-site facility.			
Freatment Provided at Your Facility.					
Which class of pathogen reduction is ach		facility?			
Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce pathogens in sewage sludge: None					
Which vector attraction reduction option	is met for the sewage sludge at your	facility?			
Option 1 (Minimum 38 percent re	eduction in volatile solids)				
Option 2 (Anaerobic process, with	h bench-scale demonstration)				
Option 3 (Aerobic process, with b	ench-scale demonstration)				
Option 4 (Specific oxygen uptake	rate for aerobically digested sludge)				
Option 5 (Aerobic processes plus	raised temperature)				
Option 6 (Raise pH to 12 and reta	in at 11.5)				
Option 7 (75 percent solids with n	o unstabilized solids)				
X None or unknown	,				
***************************************	f naner any treatment processes used	at your facility to reduce yester			
Describe, on this form or another sheet of	f paper, any other sewage sludge treat	tment activities, including			
blending, not identified in a - d above: S	ludge disposed of in a 22 acre sludg				
take its place still working on solids %	removal as promised.				
	Mailing address: Street or P.O. Box: City or Town: Facility location: (not P.O. Box) Total dry metric tons per 365-day period Describe, on this form or on another she including blending activities and treatmed including blending activities and treatmed class A Class B Describe, on this form or another sheet of pathogens in sewage sludge: Which vector attraction reduction option Option 1 (Minimum 38 percent recompliance) Option 2 (Anaerobic process, with the Option 3 (Aerobic process, with the Option 4 (Specific oxygen uptake) Option 5 (Aerobic processes plus) Option 6 (Raise pH to 12 and retate) Option 7 (75 percent solids with the Option 8 (90 percent solids with the Option 8 (90 percent solids with the Option 9 or unknown) Describe, on this form or another sheet of attraction properties of sewage sludge: Describe, on this form or another sheet of blending, not identified in a - d above:	Mailing address: Street or P.O. Box: City or Town: Facility location: (not P.O. Box) Total dry metric tons per 365-day period received from this facility: Describe, on this form or on another sheet of paper, any treatment processes I including blending activities and treatment to reduce pathogens or vector attre reatment Provided at Your Facility. Which class of pathogen reduction is achieved for the sewage sludge at your Class A Class B Noiether or unknown Describe, on this form or another sheet of paper, any treatment processes used pathogens in sewage sludge: None Which vector attraction reduction option is met for the sewage sludge at your Option 1 (Minimum 38 percent reduction in volatile solids) Option 2 (Anaerobic process, with bench-scale demonstration) Option 3 (Aerobic process, with bench-scale demonstration) Option 4 (Specific oxygen uptake rate for aerobically digested sludge) Option 5 (Aerobic processes plus raised temperature) Option 6 (Raise pH to 12 and retain at 11.5) Option 7 (75 percent solids with no unstabilized solids) Option 8 (90 percent solids with unstabilized solids) None or unknown Describe, on this form or another sheet of paper, any treatment processes used			

FA	CIL	ITY NAME: City of Emporia, WWTP VPDES PERMIT NUMBER: VA0020346
8.	Su	rface Disposal.
	(Ce	omplete Question 8 if sewage sludge from your facility is placed on a surface disposal site.)
	a.	Total dry metric tons per 365-day period of sewage sludge from your facility placed on all surface disposal
		sites: 38.5 dry metric tons
	b.	Do you own or operate all surface disposal sites to which you send sewage sludge for disposal? X Yes No
		If "No", answer questions c - g for each surface disposal site that you do not own or operate. If you send sewage sludge to more than one surface disposal site, attach additional pages as necessary.
	c.	Site name or number: City of Emporia,WWTP
	d.	Contact person: James L. Epps
		Title: Superintendent of Wastewater Plant
		Phone: (434) 634-5682
		Contact is: X Site Owner Site operator
	e.	Mailing address:
		Street or P.O. Box: P.O.BOX 511 201 South Main Street
		City or Town: Emporia State: VA Zip: 23847
	f,	Total dry metric tons per 365-day period of sewage sludge from your facility placed on this surface disposal
		site: 38.5 dry metric tons
	g.	List, on this form or an attachment, the surface disposal site VPDES permit number as well as the numbers of all other federal, state or local permits that regulate the sewage sludge use or disposal practices at the surface disposal site:
		Permit Number: Type of Permit: VA0020346 VPDES
		VAL020346 Sludge Disposal
9.	Inc	ineration.
	(Ca	omplete Question 9 if sewage sludge from your facility is fired in a sewage sludge incinerator.)
	a.	Total dry metric tons per 365-day period of sewage sludge from your facility fired in a sewage sludge
		incinerator: N/A dry metric tons
	b.	Do you own or operate all sewage sludge incinerators in which sewage sludge from your facility is fired? Yes No
		If "No", answer questions c - g for each sewage sludge incinerator that you do not own or operate. If you send sewage sludge to more than one sewage sludge incinerator, attach additional pages as necessary.
	c.	Incinerator name or number:
	d.	Contact person:
		Title:
		Phone: ()
		Contact is: Incinerator Owner Incinerator Operator
	e.	Mailing address:
		Street or P.O. Box:
		City or Town: State: Zip:
	f.	Total dry metric tons per 365-day period of sewage sludge from your facility fired in this sewage sludge incinerator: dry metric tons
	g.	List on this form or an attachment the numbers of all other federal, state or local permits that regulate the firing

AC	IL	ITY NAME: City of Em	poria,WWTP	VPDE	S PERM	MUN TIN	BER:	VA0020346		
		of sewage sludge at this i	neinerator:							
		Permit Number:	Type of Permit:							
0.]	Dis	sposal in a Municipal Soli	id Waste Landfill.				_			
j	foll seu	lowing information for ea vage sludge is placed on n	vage sludge from your facili ch municipal solid waste lan wore than one municipal soli ville County Sanitary Landfi	dfill on which . d waste landfil	sewage s	sludge fron	n your	facility is placed. If		
	a.	Contact person: Buck J								
	b.	Contact person: Dack of	ones							
		Title: Landfill Supervisor	3370		 					
		Phone: (You) 540	3379 fill OwnerLandfill	Onanotan						
	_		nii OwnerLandini	Орегают						
•	c.	Mailing address: Street or P.O. Box: 980	Maclins Creek Rd.							
		City or Town: Emporia		Stote:	VA	7 in:	2384	7		
,	d.	Landfill location.		Jan.	******	г.р.				
·	ш.		8 West 980 Maclins Creek	Rd.						
		County: Greensville								
				State:	VA	Zip:	2384	7		
6	Э.		365-day period of sewage sli							
. 1	f.		tachment, the numbers of all	federal, state or	r local pe	ermits that	regula	te the operation of this		
		Permit Number:	Type of Permit: Solids Waste Manageme	nt						
ź	g.		t applicable requirements in t the quality of materials dispo					egulation, 9 VAC 20-		
ł	1.		waste landfill comply with a 9 VAC 20-80-10 et seq.?			forth in the	· Virgi	inia Solid Waste		
i		Will the vehicle bed or other container used to transport sewage sludge to the municipal solid waste landfill be watertight and covered? X Yes No								
		Show the haul route(s) or	a location map or briefly de	scribe the route	below a	and indicate	the d	ays of the week		
			ge sludge will be transported. est. Monday,Wednesday,Friday between 07							

SECTION D. SURFACE DISPOSAL

Complete this section only if you own or operate a surface disposal site. Provide the information for each active sewage sludge unit.

1.	Inf	formation on Active Sewage Sludge Units.							
	a.	Unit name or number: City of Emporia Sludge Pond (Lagoon)							
	b.	Unit location							
		i. Street or Route#: 500 Tall Oaks Drive							
		County: Greensville							
		City or Town: Emporia State: VA Zip: 23847							
		City or Town: Emporia State: VA Zip: 23847 ii. Latitude: 36' 40' 43" Longitude: 77' 31' 35"							
		Method of latitude/longitude determination X USGS map Filed survey Other							
	c.	Topographic map. Provide a topographic map (or other appropriate map if a topographic map is unavailable) that shows the site location.							
	đ.	Total dry metric tons of sewage sludge placed on the active sewage sludge unit per 365-day period: 967.5 dry metric tons.							
	e.	Total dry metric tons of sewage sludge placed on the active sewage sludge unit over the life of the unit:							
		dry metric tons.							
	f.	Does the active sewage sludge unit have a liner with a minimum hydraulic conductivity of 1 x 10 ⁻⁷ cm/sec? Yes X No If "Yes", describe the liner or attach a description.							
	g.	Does the active sewage sludge unit have a leachate collection system? Yes X No							
	If "Yes", describe the leachate collection system or attach a description. Also, describe the method used disposal and provide the numbers of any federal, state or local permits for leachate disposal:								
	h.	If you answered "No" to either f or g, answer the following: Is the boundary of the active sewage sludge unit less than 150 meters from the property line of the surface disposal site? X Yes No If "Yes", provide the actual distance in meters:							
	í.	Remaining capacity of active sewage sludge unit, in dry metric tons: Uknown dry metric tons							
		Anticipated closure date for active sewage sludge unit, if known: Unknown (MM/DD/YYYY)							
		Provide with this application a copy of any closure plan developed for this active sewage sludge unit.							
2.	Sev	wage Sludge from Other Facilities.							
	Is s	sewage sludge sent to this active sewage sludge unit from any facilities other than yours? Yes No							
	If "	Yes", provide the following information for each such facility, attach additional sheets as necessary.							
	a.	Facility name:							
	b.	Facility contact:							
		Title:							
		Phone: ()							
	c.	Mailing address:							
		Street or P.O. Box:							
		City or Town: State: Zip:							

2.

FA(CIL	ILITY NAME: City of Emporia,WWTP	VPDES PERMIT NUMBER: VA0020346					
	d.	 List, on this form or an attachment, the facility's VPDES permistate or local permits that regulate the facility's sewage sludges. 						
		Permit Number: Type of Permit:						
	e.	e. Which class of pathogen reduction is achieved before sewage s Class A Class B Neither or unkn						
	f.	Describe, on this form or on another sheet of paper, any treatm	ent processes used at the other facility to reduce					
		pathogens in sewage sludge:						
	g.	Which vector attraction reduction option is achieved before sev	vage sludge leaves the other facility?					
		Option 1 (Minimum 38 percent reduction in volatile soli	ds)					
		Option 2 (Anaerobic process, with bench-scale demonst	ration)					
		Option 3 (Aerobic process, with bench-scale demonstrate	ion)					
		Option 4 (Specific oxygen uptake rate for aerobically di	gested sludge)					
		Option 5 (Aerobic processes plus raised temperature)						
		Option 6 (Raise pH to 12 and retain at 11.5)						
		Option 7 (75 percent solids with no unstabilized solids)						
		Option 8 (90 percent solids with unstabilized solids)						
		N/A None or unknown						
	h.	n. Describe, on this form or another sheet of paper, any treatment vector attraction properties of sewage sludge:						
	i.	± *						
		other facility that are not identified in e - h above:						
3.	Ve	Vector Attraction Reduction.						
	a.	Which vector attraction reduction option, if any, is met when so unit?	ewage sludge is placed on this active sewage sludge					
		Option 9 (Injection below land surface)						
		Option 10 (Incorporation into soil within 6 hours)						
		Option 11 (Covering active sewage sludge unit daily)						
	b.		-					
		to reduce vector attraction properties of sewage sludge: None						
4	C-	Ground Water Monitoring.						
	ur a.		ewage sludge unit or are ground water monitoring date					
•	ce.	otherwise available for this active sewage sludge unit? X	Yes No					
		If "Yes", provide a copy of available ground water monitoring locations, the approximate depth to ground water, and the ground						

FA	CIL	ITY NAME: City of Emporia, WWTP	VPDES PERMIT NUMBER: VA0020346
		data.	
	b.	Has a ground water monitoring program been prepare Yes No If "Yes", submit a copy of the	d for this active sewage sludge unit? the ground water monitoring program with this application.
	c.	Have you obtained a certification from a qualified grosludge unit has not been contaminated? Yes	ound water scientist that the aquifer below the active sewage XNo
		If "Yes", submit a copy of the certification with this ap	pplication.
5.	Site	-Specific Limits.	
		you seeking site-specific pollutant limits for the sewage Yes X No If "Yes", submit information to sulication.	ge sludge placed on the active sewage sludge unit? upport the request for site-specific pollutant limits with this

Permitee Name/Address (Include

Facility Name/Location if different)

Commonwealth of Virginia State Water Control Board
National Pollutant Discharge Elimination System (NPDES)
Discharge Monitoring Report (DMR)

Name City of Emporia Address P.O. Box 511 Emporia, VA 23847 Facility Wastewater Treatment Plant Location 100 Briggs Street Extension Emporia, VA 23847
47 tment Plant t Extension

2010 10 19	Yr Mo Day		VA0020346	Permit Number
귱		Monitor		
2011	Υ	ing		Discha
10	Мо		001	Discharge No.
25	Day			

	Chlorides	Total Organic Carbon	Nitrate - Nitrogen	Specific Conductivity	рН	Ground Water Elevation		Parameter	
III (SEE STATE OF THE SECOND S	MG/L	MG/L	MG/L	M-M/CM 94.4	SU	ft. MSL		Units	
A CONTRACTOR OF THE PARTY OF TH	S	ယ	1.6		5.04	18.58	No. 1		
\setminus	95.9	წ.		611	5.28	16.5	No. 2		Monito
	5.2	4.2	0.98	16	4.99	9.5	No. 3		Monitoring Wells
	165	3.6	0.43	725	5.32	7	No. 4		
	23.5	41.6	S	189	5.23	NA	No. 1		
	23.9	50	S	181		NA	No. 2		Sampling
	66.2	103	ND	363		X	No. 3		Sampling Stations
	23.3	55	B	179	5.47	NA	No. 4		G
	1/12M	1/12M	1/12M	1/12M	1/12M	1/12M	Sample	2	Frequency
	Grab	Grab	Grab	Grab	Grab	Meas.		Туре	Sample

Signature of Chief Operator in Responsible Charge

Signature of Principal Officer or Authorized Agent

0p. Cert #606

my inquiry of those individuals immediately responsible for obtaining the information. I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including possibility of

the information submitted in this document and all attachments and that based on

I certify under penalty of law that I have personally examined and am familiar with

these statutes may include fines up to \$10,000 and/or maximum imprisonment of between 6 months and 5 years).

fine and Imprisonment. See 18 USC SS 1001 and 33 USC SS 1319 (penalties under